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The business department of THE JOURNAL is on page 539.

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HERE was a time when the New England teacher made it a cardinal principle to have his pupils learn to recite the words of the book from preface to finis. Thomas Hill, LL.D., formerly president of Harvard college, who wrote "First Lessons in Geometry," says: "I have seen hundreds of schol-

ars, under twelve, enthusiastic in their love of the book; even carrying out its suggestions in their plays at recess. But taught, as usually taught in public schools, it is a hated and hateful torment. In 1854-'55 it was put, in spite of its preface, into the high school at Portland, Me.; and I am credibly informed that it was required to be recited verbatim. The first recitation caused a suppressed titter to run through the school when a young lady of seventeen rose, and began demurely to recite the preface: "I have long been seeking a treatise on geometry suited to the wants of my own children," etc.

Has the teacher an advancing mind? Are his pupils drinking out of a running spring, or out of a stagnant pool? Some time since a teacher moved from a Western city to one farther east. She applied for a place to teach; the superintendent wrote to her former supervising official. The answer was, "Dead a good many years ago." She did not get a place; of course, no one told her she was reported "dead."

A teacher forty (or more) years of age applied for a place; it was given to a young girl not yet eighteen years old. When a friend of the former complained of this treatment of one who had had so much experience, the official replied: "I am always afraid of these old ladies; the dust inside the Pyramids is fresher than they are. They make the children gasp for fresh air."

Has all this complaint about dead teachers no foundation? Would that it were so! The teacher is only required to know a little about arithmetic, geography, etc.; this is his stock in trade. There is no demand by his pupils that he be an exceedingly well-informed man, and as he can get along without being such, he remains just where he was when he first began to teach. What a misfortune to the pupils under him!

Let the teacher ask himself these fine May mornings, "What have my pupils derived from me in addition to or beyond the facts that four times twelve are forty-eight, and that Springfield is the capital of Illinois, etc.?" What can the pupil get? Can he get anything if it is not "there"? Will anything be "there" if the teacher does not put it "there?" How is it that we are so influenced years afterward by a short conversation? Why do we remember it? What does Coleridge mean when

he says: "Two men step under an archway for ten minutes out of the rain, and the educated man leaves an indelible impression"? What does Bishop Huntington mean by "Unconscious Tuition"?

Last September, Mr. Geo. B. Kilbon, of Springfield, Mass., opened a "correspondence class" for those desiring to understand wood-work by simple tools. He writes: "Concerning the correspondence class, I have to report 27 letters of inquiry received and information asked for given. Seven of the writers purchased a copy of 'Knife-Work in the School-room;' 5 purchased a set of tools, and 4 purchased material for the first year's work." It can only be said that an opportunity has been lost that might have yielded rich results. Those who have tried to get hold of these new phases of school-work will not regret it. As County Superintendent Berryman says: "Teachers are slow to move in new lines."

How are the outrages committed by students to be accounted for? The hazing of college boys has caused indignation enough to instigate the severest measures on the part of college authorities against it; but whence the brutality that instigates the outrages themselvesoutrages perpetrated by the sons of gentlemen upon the sons of gentlemen? The philosophy of evolution suggests that youth must pass through barbarism on its way to civilization, and, from recent reports, it appears that the youth, even of "the gentler sex," can be led by vicious leaders into a delight in cruelty. The mob spirit, among whose atrocities are listed those of the Parisian reign of terror and most of the horrors belonging to religious and political persecutions and outbreaks, seems to find an opportunity wherever numbers of young people of nearly the same age are congregated without sufficient control. A gang of boys, each of whom loves his own dog, will unite in torturing one that is ownerless. Girls belonging to respectable and benevolent families have been known to band together in school for purposes of malicious mischief. Would they organize as strongly, under better guidance, as Bands of Mercy? Are the schools neglecting a power for good in not leading the pupils to form clubs and societies, self-governing and devoted to humane purposes? May not this be one great and overlooked means of "fighting evil with good"?

There is a sweet harmony possible to pure childish voices; and when these little voices are trained to express the feeling of the music, when they sing their morning hymn in light, joyous measure, and with soft melody, the heart must be hard indeed that is not touched and elevated. Music like this we bear with us long after the song has ceased. By imperceptible degrees it refines us; it purifies and elevates our taste, and we can never fall quite back into our old selves again.

-HENRY T. BAILEY.

#### Number.

PRINCIPLES UNDERLYING THE METHOD OF TEACHING IT. By HERBERT PARK.

I. Proceed from the concrete to the abstract: Sense-perception is the absolute foundation of all understanding.

The child gains his idea of a number by seeing it represented by familiar objects. He sees and hears of two eyes, two hands, two windows and gradually notices that two does not signify a quality, but a definite quantity; he learns to abstract the number from the objects, and to think the pure (abstract) number. This observation applies to all learning in general. But there is no other branch of instruction where a child gains abstract ideas so early and so easily as in number teaching. In fact, the occupation with pure numbers begins already on the first stages of the child's development. This important fact is self-explanatory psychologically. All other ideas but those of numbers are very complicated, as they comprise a manifoldness of properties-"apple, for instance, although comparatively a very simple object, suggests a great number of ideas, the result of examinations made by the senses of sight, hearing, taste, touch, and feeling, but "four apples" concentrates thought on the quantity and merely indicates the number of times the object in question is to be before the mind. This facility of abstraction in number work makes elementary arithmetic a most important and powerful factor in the mind development of children.

Hence the following order of proceeding:

r. Use familiar objects (the simpler they are the better) to develop the idea of a new number.

(The means for illustrating numbers are either natural or artificial objects. Of natural objects the fingers are the simplest and best adapted to the purpose. Of artificial means we might mention the bead-frame and the dots, lines, squares, rings, crosses, and stars drawn on the blackboard and slate to illustrate numbers and operations. There are many other objects that might be used with advantage in the first years, such as counters, pebbles, beans, shells, blocks, buttons, marbles, nuts, nails, etc. Variety of expression and copiousness of illustration are urgently required, lest the number lessons become tedious and time and energy are wasted.)

2. Exercises on the number referring to familiar

absent objects.

3. Exercises on the pure (abstract) number; i.e., with-

out any reference to present or absent objects.

4. Applications of the knowledge of the number gained.

II. All number teaching should proceed in an elementary order, from the simple to the complex, from the easy to the difficult, from the known to the unknown.

This is the principal rule. It is based on the nature of the subject matter as well as on the child's power of apprehension. The most difficult points in counting and calculating should be exhausted on one stage before commencing the simplest parts of the next. The circles, from 1 to 10, from 10 to 20, from 20 to 100, and from 100 to 1000, should be considered successively and thoroughly mastered. The larger numbers are compounded of the smaller ones. If the children are not thoroughly conversant with the latter, they can have no idea of the former: arithmetic becomes a repulsive mechanical rote-work and makes the child unfit for the practical work of life.

The rules that must be learned to gain an intelligent insight into the operations with numbers are taught in just about the same way as the laws of grammar. The teacher provides a sufficient number of examples and then leads the pupils to discover the underlying principles for themselves. The treatment of an operation must prepare the understanding in such a manner that it only needs proper arrangement and skilful questioning to develop a clear conception of the principle. It is wise not to give more theory than is absolutely necessary; for the point to be aimed at is ready and intelligent doing. Hence after the principle of an operation is known, provide plenty of practice.

IV. One difficulty at a time.

"One difficulty at a time" is a golden rule in teaching number. Some operations may be performed in a number of ways. But the careful teacher concentrates his efforts on the normal procedure and practices this thoroughly with the class. After it is well understood, he may point out certain advantages, shorter routes, so to say, that may help the pupils to do more rapid

V. In developing explanations and solutions never go back to the elements further than absolutely necessary.

Too much repetition is tiresome to both teacher and pupil, and should be used only as a means to recall ideas that may have been forgotton. In developing new ideas they may be of assistance, but then the teacher should nor haul out too far, not go back further to the elements than is necessary. The time lost in idle repetition may be employed more advantageously.

VI. Be thorough; proceed steadily and cautiously, but not too slowly.

The teacher is apt to be misled by the work of the particularly able pupils to hurry on to a higher stage, before the class in general has thoroughly mastered the work of the previous one. "Hasten slowly," must be the rule here. Too much hurry leave grave defects in the work; too slow a proceeding destroys the interest of the class.

VII. Combine exercises on the pure and applied number, oral and written calculation.

We speak of mental and written arithmetic. difference lies simply in the manner of expression. In mental arithmetic, so called, the pupil expresses results orally, in written work he uses figures. All number work is mental work. This is important. Number work is not mere figuring, neither should it be mere finger work. Written work has many advantages over purely oral work. It keeps the pupils busy, while another class division is being instructed. It assists the teacher to examine more closely into the progress of the individual pupils and to form a correct opinion of the results of her teaching. It multiplies exercises in number work and brings more change and variety into it. Besides, the more complicated problems could hardly be correctly solved without the aid of figures. Still mental arithmetic has also its good points. What is aimed at here is, that the teacher must at every step give exercises in both oral and written work and should not allow one to crowd out the other.

#### VIII. Give suitable and practical examples.

In choosing material for number work, the teacher must bear in mind two things: first, that every new step is to promote mental growth; second, that the child is to learn the practical value of number work. The examples must be suitable, not too easy nor too They must be given with a view of preparing the pupils for the affairs of practical life : coins, measures, and weights, the cost of the necessaries of life, of the construction of buildings, bridges, etc., can all be made the basis of profitable exercises. This initiates the child in the practical work of the world, and increases his interest in the operation with numbers.

#### IX. Be economical.

In the primary classes where the work is mainly oral and requires constant illustration, it is hardly practicable to put text-books into the hands of the pupils, although there are some excellent ones in the market for this purpose but in the more advanced work the teacher cannot do without them. Time is too precious to be wasted in dictating problems. Every new step is of course explained without the use of any book. blackboard is of greater value. But, after all necessary explanations have been given, the text-book is taken up and the problems there given used as material for abundant practice.

X. Every lesson in number work should be a language lesson.

In all number work lay great stress on proper expression. In written work every process should be carefully indicated, the whole must have the appearance of a well written composition. In oral work the teacher should insist on perfectly clear, simple, and definite expression. In this way, every lesson in number is made a language lesson, and that it should be. There is only one advice to be given in addition to this. Be as brief as possible, but do not omit important points,—and teach your pupils to follow your example. Pestalozzi appreciated this pointy briefness. He said: "If you have to lie awake nights to say in two words what others explain in twenty, do not regret your sleepless nights."

# Glittering Generalities.

The educators and the public were once well satisfied when addressed if only general remarks were made. The usual plan has been to devote a quarter of the address to the importance of education to a republican people, another quarter to showing that America leads the world in education, another to the necessity of moral education, and to end with sage remarks on the duty devolving on that particular set of people there assembled.

Now it is not to be denied that a great deal of good has been done by these broadsides; the public has be-come impressed with a belief that education must be imparted; the fact that two or three hundred people will gather and sit for an hour or two and listen to a discussion, relevant or not, has an effect. A wide-spread confidence has been created, and this is of enormous But when the usual address is thoughtfully considered it does seem remarkable, that on a subject so important as education so little is said that seems to be drawn from deep and living wells. Instead of delving for basal truths the speaker prefers to travel over the beaten pathway and pick up and serve out suggestions that are the product of a sound enough mind, but which greatly resemble the lawyer's address at an agricultural convention, or a clergyman's speech at a medical banquet. There is less satisfaction in these later years in listening to addresses on education by men of general learning than there was formerly. There has been learning than there was formerly. enough progress made to enable teachers to see that what they want is logical expansion of basal truths. The first great step in making the Jews into a nation was the announcement on the two tables of stone. Those ten laws, that rang in our ears in early life, have accompanied us all our way in life, and will be With this to thought of as we draw our last breath. mark them off from all other peoples, from this time onward, that wonderful nation enters on a career that is distinguished from any other accomplishment in history. Foundation truths were reached, and an attempt made to live up to them.

The advantage the preacher has over the teacher is that he has an organized collection of theology-tenets before him; most teachers have only the practice they have witnessed or upon which they have themselves fixed for reasons that seem good to them, from which to develop their educational creed. Most of those who deliver addresses are men who, though they have been a long time in the school-room, yet look at their work from its productive side only. That the boys may do all the sums in the arithmetic, read well in the readers, answer the questions in the geography, etc., is what is aimed at; their educational principles are founded on their experiences in attaining these ends. Such a man may teach for fifty years without an educational creed. When he comes before an audience what can he say? If it is an audience of the general public he may be listened to with more pleasure than by educators.

The need of the hour for the teacher is a clear apprehension of educational principles; how few there are that have them. The head of an important state normal

school when asked for his leading principle replied, "Strike a line and hew close to it." The themes of graduates of normal schools this year, what will they be? It would be difficult for a person reading the titles of the graduates' essays to conclude the school had any special character. Glittering generalities are found here. "Washington and Bonaparte Contrasted," "The Rights of the Indian," etc., etc.

The usual courses of study marked out in our city schools cannot but check all attempts at scientific thought and work. The first thing should be to announce the educational principles that are to govern what is recognized as the object sought by teaching. Is it that the pupils can "work examples"? In an address by an able superintendent he says, "The true theory of education is the development of the force God has implanted in the child." Now if we look in his annual reports shall we find that this and other kindred truths are made into a scheme and that applicants are examined as to their knowledge of means "to develop this force;" and that teachers are measured as to their success in "developing this force"?

The subject is a suggestive one. We are not yet on solid ground. The teacher must be enlighted concerning basal truths to enable him to do really valuable work for the pupil.

James L. Hughes, public school inspector of Toronto, after a four-days' visit at the Cook County normal school wrote:

"The following are the distinguishing characteristics of the Cook County normal school:

"First. Special adaptation of each member of the training school by natural ability and careful attention to the work he or she has to do.

"Second. The perfect harmony existing between the methods of the different teachers. It is not the harmony of quietude, but of vitality.

"Third. The ideal of the school is true and high. I know no other normal school with so high and well defined an ideal as that of the Cook County normal school; none so free from the weakening restrictions of the educational ideas of the past.

"Fourth. The organization of the school is thorough and calculated to bring the best efforts of each student into training by placing responsibilities of a proper character on each member of the class.

"Fifth. The methods of the school are philosophical. They are based on the sound pedagogical foundation: 'That all individual growth comes from individual effort,' and every teacher follows his or her methods without violating this basic principle. Each student has to make his own investigations and report his own discoveries in the science department; to make his own plans and execute them in the construction department; to make his own researches in the department of history, geography, and literature; to analyze and execute into original designs the elements submitted to him in the art department, and to do his own thinking in the biological and psychological classes.

"Sixth. One of the best features of the school is the system to secure great accuracy and to develop the power of logical arrangement in the preparation of lesson plans. It is of great importance that all students should be trained to study with a definite purpose. So far as possible all knowledge should be acquired for immediate application. In most schools knowledge is gathered to be reported, not used. The students of the Cook County normal school study with a definite aim which they are to execute directly.

"Seventh. The thorough yet sympathetic criticism of the teaching done by each student, and the admirable arrangement for classifying and ranking students according to their executive ability instead of their ability to gather and report facts are the distinguishing characteristics of the school. The opinion I formed of the school may be expressed in a single sentence: It is the most stimulating institution I have seen for the fullest training of teachers."

## The Value of the "Emile."—II.

HISTORIC CRITICAL STUDY.

By Owen MacPherson, New York.

Up to the time of Rousseau the principles derived from the nature of the studies were the guides, how to adapt the child to the logical order of science the uppermost question in pedagogy. The "Emile" exploded this unnatural and false principle, and founded education on a new basis, on the study of child-life. How to adapt education to the different stages of growth was the "burden" of this legacy to pedagogy. Rousseau was a master in the art of picturing childhood. He revealed the whole physical and psychical life of child-dren. He showed man as nature had made him and followed his natural growth from the vegetative stage of infancy to the highest human perfection in complete manhood. The disastrous effects of substituting artificial means for those founded on the laws of life, of perverting the order of nature and subduing her educative influences, were painted in glaring colors. Faults of children that escaped the notice of educators, were uncovered; on the other hand, he pointed out the narrow-mindedness of adults who looked upon childish mischief as a crime and stamped carelessness as malice. The introduction into the real, innermost life of childhood, into the natural causes of the formation of good and evil habits, formed the nucleus of the "Emile" and gave the book the epoch-making power.

"Study your pupils more closely," wrote Rousseau, "for it is very certain that you do not know them; and if you read this book of mine with that purpose in view, I do not believe that it will be without profit to you. That struck home. The study of childlife received a new impulse and turned from the sterile rocks of speculation to the vast and fruitful fields of reality. Pestalozzi was inspired by this thought; he followed Rousseau to the summit of the Nebo and saw the beautiful world of new education beyond. His philosophy of education immortalized the fundamental thoughts of Fræbel caught its spirit and turning from the playful activities of the child to the prompting impulses within found a new paradise of childhood. Herbart heard the plea for recognition of the child's individuality and made it the keystone of his science of education. Thus Rousseau's masterly treatment of the subject of child study led to the foundation of a new philosophy of education, one that would not force all human beings into the Procrustean bed of a scientifically constructed homunculus, but would take the child as he is, with all the incongruities and surprises of his individual nature and adapt itself in its processes to his physical and mental capabilities. If it had been known before Rousseau that each child must be studied for himself and that physiology and psychology can give only the general laws of human growth that make the study of individualities easier and more accurate but cannot be accepted as an equivalent substitute, it had never been made sufficiently clear and important and was certainly never acted upon. The impulse given to the study of childhood must be directly at-tributed to the influence of the "Emile," notwithstanding the many excellent psychological and pedagogical treatises that preceded it.

If we look for the secret of the wonderful effect of the "Emile," we shall find that it lies entirely in the manner in which the author presented his thoughts. There is nothing scholastic about it, no attempt at a scientific arrangement of thoughts. It is the work of an artist, a poet, full of feeling and glowing passion. Its great and distinctive purpose is made clear not by appealing to reason, but by rousing the emotions of the reader, by alluring him into depths of error and raising him again higher and higher up to the dizzy summit of truth. Rousseau here shows himself as a master in the knowledge of human nature. No one wants to be told that he is in need of instruction and must follow the author's reasoning closely and learn from him. Yet if his judgment is taken captive by a weird, seductive style, he loses sight of the guide, and willingly follows

him. That is the charm of Rousseau's "Emile." The generation that saw its advent had felt the pressure of dogmatic preaching too long, it shunned cold reasoning. That made the time the poets' reign. And it was the poesy of the "Emile" that could succeed where the arguments of Locke, Voltaire, and Basedow had failed. The value of the "Emile" as an educational classic is in the main of historical significance, for it started the train of thoughts that built up the modern philosophy of education. Brant's "Ship of Fools" and Rabner's "Satires" have also in their way effected a progress in education, but-and here lies the difference between the "Emile" and other epoch-making books-their mission ended with the birth of the change that they aimed at, and they are to-day studied merely for the glimpses. they afford into the origin of certain upward movements in the history of pedagogics, while Rousseau's "Emile will be read as long as there is a philosophy of education, and will ever be a source of inspiration and a guiding star to the educator who knows how to sound the value of its ideas.

The "Emile" is a mine of pedagogic thought. But it takes a soundly trained mind to discover the treasures The bewitching rhetoric of Rousseau is apt to mislead the unwary reader, and taking, his judgment captive tempts him to pick up gleaming but worthless metals and conceals from him the countless gems that are strewn about. An easily influenced soul whose whole life centers in the emotions is plunged from one extreme into the other; the subtle nihilism of the author saps the roots of innocent faith and cripples judgment and reason. On a coldly analyzing mind, that breaks the glittering shell to find the hidden kernel, the effect is disappointing, or perhaps entirely lost. Take the witty Voltaire, for instance, whose cold and cutting sarcasm Rousseau feared more than all the attacks and persecutions from the literary yelpers of his time : he rends the beautiful painting to show that it is canvas at seventy-five sous a yard. The "Emile" must be read as one would read Longfellow's "Evangeline" or Schiller's "The Walk." We would not use the former masterwork as a text-book for the study of the historical events on which it is based, nor could the latter poem serve as a substitute for a treatise on the evolution of civiliza-But the light that streams out from these poems gives life to the facts of history and deepens our insight in them. So with the "Emile." It is not a textbook on pedagogics and cannot be used as such: it is a work of art, a poem. Without a previous knowledge of the fundamental laws of education, its true value cannot be appreciated; it intoxicates the judgment as Byron's "Heaven and Earth" or Schiller's "Gods of Greece" would a wavering mind. But one who has passed the elementary stage of the study of pedagogics will find it an even fresh source of new and inspiring thoughts to strengthen his love of childhood, his feeling of the dignity of the work of rearing children, his appreciation of the value of the laws of human growth as guiding principles in the work of education, and his insight into the truth that it is not what man knows, but what he is that determines his life efficiency.

# Normal Training Necessary.

There are some natural teachers, some who teach well without professional training; but these, like all geniuses, are not very plentiful. Teaching, like every other profession, has to be learned. Doubtless many a farmer might become a good lawyer, in course of time, by going immediately into a justice court and beginning to practice law, but who would wish to be the victim of his blunders, in order that some day he might become a passable lawyer. The same, doubtless, would be true in the practice of medicine, and the same query would be very pertinent. Because one knows the taste of quinine is no argument that he knows how to administer it. The important thing is the diagnosis. It is only in the teaching of little children that we freely sacrifice the interests of those most concerned, in order that young men and women may undertake their work without preparation.

—O. T. B.

# The School Room.

# Cause and Effect in Proportion.

To arrange the numbers in a problem in proportion, the method of cause and effect is well adapted. The pupil needs a reason to guide him and this method furnishes it. Take this example: 1. In how many days, working 9 hours a day, will 24 men dig a trench 420 yards long, 5 yards wide, and 3 yards deep, if 248 men, working 11 hours a day, in 5 days dug a trench 230 yards long, 3 yards wide, and 2 yards deep?

Certain things constitute the effect; certain other things constitute the cause. By close examination the first cause may be selected and the corresponding first effect; then the second cause

stitute the cause. By close examination the first cause may be selected and the corresponding first effect; then the second cause must be looked for and the second effect - so proceed though; x will take the place of the required number of days. What is a cause? "248 men." What effect do they produce? "230 feet of ditch." What other cause of the same kind is there? "24 men." What is their effect? "420 feet of ditch." What is another cause? "5 days." What is the effect? "3 feet wide." What is the other cause? "Unknown." (Represent it by x.) What effect does this produce? "5 feet wide," etc.

First Cause : second Cause :: first Effect : second Effect.

248 men ) 5 days }	: <	24 men ) x days	:: {	3 wide	: -	420 long 5 wide
11 hours)		9 hours	- (	2 deep )		3 deep.

# The Purpose of Problems.

By E. C. BRANSON.

One of our training class teachers has just returned from a month's trip through the schools of the North, and reports that she found in a first-grade room, in the model school of a normal college, little folks struggling to decrease 200 by successive subtractions of 3's. The presentation of such problems in a normal school leads one to inquire what is the purpose of problems? problems ?

Counting the learning of tables, figure processes, working with naked equations and the like to make up uniformly the staple of instruction in primary numbers, it is well to look for the ultimate purpose. To me, it seems to be— To unlock the meaning of *Problems* for the child—

a. Through sense experiences of actual numbers, actual operations with them, and language for these operations:
 b. Through suggestions, which arise in the child's mind from

these sense experiences—suggestions of the relations embodied in story-like problems—which are to be of his own making,

An order of exercises in teaching the details of quantity in numbers, taken in Grube order, is as follows:—

(To be used after the equation forms have been taken; say,

after the No. 6.)

a. First set—Give operations with objects: Ask for equation statements orally. Ask for written equations. Ask for problems. a. First set—Give operations with objects. Ask for problems.
b. Second set—Give drawings: Ask for equation statements orally. Ask for written equations. Ask for story-problems.
c. Third set—Give written equations: Ask for drawings. Ask for reading and results. Ask for quick answers orally.
d. Fourth set—Give story problems: Ask for object solutions. Ask for drawings. Ask for written equations. Ask for quick

Ask for drawings. Ask for written equations. Ask for quick oral answers.

You will note an approach to the problem through all the ne-You will note an approach to the problem through all the necessary details of faet, and in the fourth set of exercises, a variety of solutions that thoroughly test the child's appreciation of the pictures in the problem. "Seeing the picture," "getting the thought" in a reading lesson, has been abundantly stressed; but seeing the picture, and getting the thought in a problem in arithmetic, has been very little emphasized. As in readers, so in arithmetics, good pupils will not read beyond the limits of their experiences. What is needed is to supply the necessary primary experiences and their special forms of language,—materials for making pictures out of problems.

pictures out of problems.

Of course a final test of a pupil's understanding of a problem is his ability to translate it into its equation (one or more). be trained from the start to see a problem in every equation and an equation in every problem. A standing requirement in this department is to permit no pupil to attempt the figure processes until he has stated the problem in equation form.

It will be seen that here we regard problems to be the staple of work in a stated the problem.

work in arithmetic-to be kept in sight from the very start; the exercises in number measurements, operations, equations, tables, figure processes, and what not having to do with problems from first to last.

For instance, no pupil teacher is permitted to say to her class:
"Divide 675 by 75." Rather, "\$675 buys Shetland ponies at \$75 "Divide 675 by 75." Rather, "\$675 buys Shetland ponies at \$75 apiece. How many ponies?" Pupils are obliged to picture the situation and see in it the necessary operation and process.

Beginning Long Division.

A correspondent asks how to begin long division. That depends. A great many now teach the form of long division before short division. Some teachers, however, receive pupils who know short division pretty well and with whom long division is to be the next step.

to be the next step.

Present one difficulty at a time. Let the first point be to get

Here, pupils, is an example in division. Have I put it down

right? 4)3945.
You think there should be a line underneath the dividend? Well, I'm going to leave that out to-day, because I want to put down everything we think and say about the work. Robert, just imagine the line is there and begin the example. "Four into 39 goes 9 times and 3 over."

I'll put the answer over here, with this line to cut it off. How

I'll put the answer over here, with this line to cut it off. How you know there is three over? "Because 9 times 4 are 36 do you know there is three over? and there are three more in 39."

and there are three more in 39."

You mean that 36 taken from 39 leaves 3. I'll put down the subtraction, to be sure we are right. That is what I wanted this space for. From what am I to take the 36? "From the 39."

Here it is. And the remainder? "Three."

Sidney, make believe we are doing it the regular way and go on with the division. "Four into 34 goes 8 times and 2 over."

You needn't tell me how many over until we find out. We will make believe we are little fellows, and don't know these large numbers. Where shall I write the 8? "After the 9."

And how shall we find what is left. "Eight times 4 are 32 and there are 2 more in 34."

But that doesn't tell me what to do with my chalk. Suppose I bring this four down beside this 3 and so get my 34 together?

Let us see how that works. Now subtract. "Two remainder."
Ralph, forget that there is anything in the way here, and go on. "Four into 25 goes 6 times and 1—."
That will do. We will see how many over. Where shall I put the 6? "To the right of the 8."

And how shall I find my remainder 2. "Take 24 from 27."

And how shall I find my remainder? "Take 24 from 25."
I see no 25. "Bring down the five."
I have it! Subtract. "One remainder."
What do we always do with our last remainder? "Set it over the divisor at the end of the quotient."
Let us do the example the short way and see if we get the

same answer. Which is the better way? "The short way. It doesn't take

so long."

No, nor so much space. It is better for some numbers. But the long way is better for other numbers. Let us practice it a little. I will crase this work and see who can remember all that we did here. You shall tell me just how to get it all down

again.

After recalling the process by repeating the first solution give other examples. Send bright pupils to board and have class help them through. Have a little, just a little, concert work. When the process is pretty well understood, give slate work until the pupils can work independently. Practice with short divisors as high as the tables go.

The next point is the longer divisor with the trial quotient figure. Begin with 21, because that is the easiest. For some reasons it would be better to begin with 91 but that would frighten the timid.

frighten the timid,
Follow with 31, 41, etc., up to 91. Then take 92 and follow the descending scale, 82, 72, etc. Having reached 22, take 93,

the descending scale, 82, 72, etc. Having reached 22, take 93, 83, etc., down to 13.

When the tens figure in the divisor is greater than the units, the greater the difference between them, the easier the work. When the units figure is greater, on the contrary, the greater the difference, the more difficult the work. An easy divisor has a left-hand figure large in proportion to the next figure on the right. A difficult divisor has a left-hand figure small in proportion to the next figure on the right. The descending scale by decades, therefore is one of ascending difficulty.

Your pupils may or may not learn how to manage two-figure quotients with perfect readiness without using every divisor less than 100. When they are ready for the next step, the three-figure quotient, take it.

ure quotient, take it.

"I taught, partly because I heard it was a good route to the presidency, and partly because I needed money. It was tortunate that I did not need much.—Bill Nye.

State Superintendent Raab, of Illinois, is opposed to state uniformity of text-books on the ground that it is tyrannical.

# Indian Geographical Names:

#### Historical Meanings.

By EMIL SEYTTER, Ph. D.

Leaving the United States and entering the ancient empire of the Aztecs, Mayas, and Tarumare Indians we find a no less interesting field of research.

The ancient name of the Aztec country, and one which is still preserved in the appellative of one of its plateaus, was Anahuac, i. e., the 'country near the water' (the Aztec atl, or simply a, stood for water). Their ancestors had migrated into Mexico in the twilight of prehistory. stood for water). Their ancestors had migrated into Mexico in the twilight of prehistory.

Many are the traces of the old Aztec idiom still to be found in

the language of the present inhabitants. In the Spanish speech of Nicaragua, for instance, words like moyote (mosquito), sacate of Nicaragua, for instance, words like moyote (mosquito), sacate (grass), mecate (thread), metate (stone on which Maize or Indian corn is ground), and cicicote (a red bird), are derived from the Aztec forms mayatl, sacatl, mecatl, metatl, and chichiltic (red) and tototl (bird). There is nothing astonishing, then, in the fact that the geographical nomenclature of this region should still be much pervaded by Aztec elements.

Yinotépet, the name of a Nicaraguan village, means 'windmountain'. Tépetl is the word for mountain and Yino, a corruption of Chiquinau, the Aztec deity of the air, stands for wind. Numerous other names contain the word thetatl (mountain) in more or

of Chiquinau, the Aztec deity of the air, stands for wind. Numerous other names contain the word tépetl (mountain) in more or less abbreviated and corrupt forms. Ometepe, an island, suggests the English name 'two peaks' and was so-called from the two volcanic craters rising from it. Masatepet is the deer-mountain from the Aztec word mazatl, a deer. Popogatepec and its synonym Popocatepetl are both 'smoking mountains.'

Tacatecas and Tacatlan, an old habitation North of Tlascala, are 'places of Maize straw.' Capulin, the name of a village and district, means 'the cherry' and Atotonileo, a hacienda in the neighborhood of Sombrerete, is 'a place of hot water.' In the province of Vera Cruz there is a basket village, Chiquihuite, chiquihuitil meaning basket in Aztec. Similar terms are Mezquite (Aztec, mizquitl) 'village of gum-trees;' Nochiztlan, 'the place of Cochenille' from nochtli, Cactus, and eztli, blood, and lastly, in the province of San Luis Potosi, the village of Chila, i. e., the 'place of Spanish pepper.' Coscatlan, in the same province, means 'place of jewels,' from the Aztec cuzcatl, a round jewel. The name of Chihuahua is derived from the language of the Tarumare Indians and has the meaning of 'town of pleasure.' Guatemala, in Aztec Quauhtemallan, is a place of wood piles, from quahuitl, wood, and tema, to pile up.

from quahuitl, wood, and tema, to pile up.

One of the most savage of Indian tribes was that of the Chichimees which name was given to them by their oppressed neighbors as an opprobrium, for it is derived from the word chichi, i. e., a dog.

During one of their raids in 1064 they destroyed the city of

During one of their raids in 1064 they destroyed the city of Tula, whose inhabitants took to flight and founded the city Cholulan, which means the "city of the exiles."

Very rich in interesting names of localities is the Yucatan peninsula whose name itself is to this very day a puzzle to linguists who cannot agree upon its derivation. Some think it is derived from the word tectecan, i.e., "We don't understand," and hold that when the Spaniards asked the inhabitants about the name of their country they were given that answer. Others assert that the answer to the question alluded to was "Ciu-Than" or 'say', i.e., 'call it yourself.' The most probable theory, however, seems to me the one which derives it from "Yuca-Tan," the land of the yuca plant, for beside the similarity between the two being exceedingly striking the yuca is very common in the peninsula.

of the yuca plant, for beside the similarity between the two being exceedingly striking the yuca is very common in the peninsula. Yucatan is the region of some of the most gorgeous ruins human eyes ever beheld, and has of late excited the interest of the explorer and the archeologist. There, in the midst of the tropical forest wilderness, lie buried cities with palaces and temples erected by a people extinguished to-day and mouldering side by side with the creations of their genius. One of the most important of these buried cities is Uxmal. In the neighborhood of Uxmal is Tolokh-eis, the holy mountain. Another ruined city is called Chichen-Itsa, a word consisting of two parts, the first of which, Chichen, means 'opening of a wall,' and the second, Itsa, was the name of one of the chief branches of the great Maya family, which in times gone by belonged to the confederacy known as the Mayaycan.

Acamapitgin, in the same region, means 'a hand full of reeds', probably in allusion to its being situated on swampy, reedy ground.

reedy ground.

Macuilxochitl is the 'fine flowers' and Quanhteuchan the

'dwelling of the eagle.'
In the mountains of Central America the traveler is often com-In the mountains of Central America the traveler is often compelled to seek shelter for the night in lonely wayside houses called Tambos. These houses derive their name from a word of the Qquichua language tampu meaning 'house of refuge.'

Pachacamac, once the sacred city of the lncas and now a wretched village of reed huts on the Pacific ocean, 20 miles distant from Lima is the 'earth' (myd?) town' for the word is

composed of pacha (earth) and cama (created) from the verb

camani (to create).

Mitla, the capital of the Tzapotecs, is either connected, with Mictlan, 'the abode of the souls after death,' or with Mitl, a deity of the Nahuans. Another name of it was Lioba or Yobba, city of death.

i.e., 'city of death.'

The name of Tzapotec itself is derived from Tzapotl, a well known fruit, as Molina tells us in his "Vocabulary of the Spanish and Mexican larguages." They called themselves Didsusa, Chapultepec, one of the most delightful spots of the Mexican valley and which supplies the city of Mexico with water, is the 'hill of the grasshopper.' Tzompanco is the 'place of skulls, and Chimallpopoca 'the shield full of smoke.'

Another mountain in the neighborhood of Mexico is called Istacibuall, or the 'while zwoman.'

Istacihuatl, or the 'white woman.



# The Philosophy of History.

The Advance gives the following abstract of a lecture given by the Rev. E. P. Powell, of Clinton, N. Y., before the Brooklyn Ethical Association:

"My most serious task is to define history. It is the story of man—of his escape from the brute. History is not so much concerned with men as with man. It has not cared much for individual men, but much for humanity. History, then, is evolution, and thus is encyclopaedic, Civilization is the progress of historic evolution. All races have moved up through the same steps of progress. History is an evolution of the human family. Church and state find their roots in the family. Christianity is as purely historic as Mohammedanism. Advancing civilization has for ages been Aryan, and America is simply climacteric Aryanism. All civilization has moved with the race which began with the family and followed it. We inherited the family from the beast and improved upon it. The early man created the desire for immortality.

"The family from the beast and improved upon it. The early man created the desire for immortality.

"The family widened into clan and nation, lastly into the federal union of states. Family life and language have followed the lines of evolution. The earliest differentiation of the family was into church and state, and the early patriarch, who was both priest and ruler, was succeeded by the patriarch and the priest.

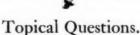
"All society was developed from this court of the cou

patriarch, who was both priest and ruler, was succeeded by the patriarch and the priest,

"All society was developed from this root form. The original family combated higher ethics. The very idea of the family made war with other families necessary. Each original family lived for itself. Wife and children were held as property. England was conquered by family races who formed towns, and united towns into counties and the counties into states.

"To the idea of the town and state rights, which came to us from England, was added the rights of man, derived from France and united in the formation of the federal union. The two lines were worked out in the North and South, and were welded together. The Declaration of Independence was English in spirit and spunk, and French in sentiment. Our constitution was derived in like fashion. The individual has become the governmental unit, while the government has only the rights conceded by the states, which derived their rights from the townships. The nation is an evolution from the states. A union of states can cover the entire continent, and then spread to enwrap the entire globe. A few more years of natural evolution and this will come about. We are on the road to a confederated humanity, the kinship of the human race."

- 1. Read the above to the advanced class.
- 2. Require compositions.
- 3. Have essays of leading thinkers read and freely discussed. -The written should precede the oral discussion to prevent the borrowing of thought-this being the advanced class



# The Peary Expedition.

By JOSEPHINE SIMPSON, Jersey City, N. J.

- 1. What brilliant Arctic expedition \* has been lately accom-
- What can you state of its leader?
   What two societies aided Lieut. Peary in paying the expenses of the enterprise?
  - 4. When did Lieut. Peary start for Greenland?
    5. What was the name of his vessel?
- 6. Where and how did the exploring party spend the winter?
  7. What was Peary's theory as to the best way of reaching the north end of Greenland?
- 8. What can you state of his success in trying to prove his
- theory?

  9. What was the distance traversed by him with a single com-
- 10. Can you trace his course?

  11. Who, in a former expedition, had reached probably the most northern limit of Greenland?
- 12. What animal life did Peary meet with in the extreme
- 13. What does he say concerning human life on the north
- 14. What statement does he make about snow?
- 15. Upon his return toward camp whom did he meet?

\*See Peary's dispatch in N. Y. Sun, Sept, 12 and 13.

- 16. What northern latitude had he reached? "On June 28 we were under the 82° parallel."
- 17. What means of travel did Peary use?
  18. What are "skier"?
- Who was Peary's sole companion on his famous exploring 19. trip?
  - 20. What woman was a member of the expedition?
- 21. Of what service was she to the party? What general statement might be made concerning this expedition?
  - 23. What are some of the valuable results of the enterprise?
- 24. Are such expeditions of any practical value?
  25. Up to the present time what flag has been planted furthest north on the American continent?



## History.

#### THE SEVENTEENTH CENTURY.

The teacher should first get a good grasp of the events of this century, so that he can look at it as a whole. He may place on a sheet of manilla paper, 3x4 feet, the main events; they will furnish heads for his remarks. Each pupil may copy them neatly in a book; the dates are not given, however, to be learned. The sub-

a book; the dates are not given, nowever, to be learned. The substance of the teacher's remarks will be somewhat as follows:

The 17th century is principally noted for the Thirty Years' war (1618-48), which began in the tyranny and bigotry of Ferdinand of Austria; this war desolated and depopulated Germany; it ended the political power of the Empire (explain what the Empire was); Bayard Taylor says the German people were set back 200 was in observed.

years in character, morality, and intelligence by this war.

The war was begun by Ferdinand; he was a Catholic and tried to destroy the Protestant faith. Other nations were involved, the Danes, the Swedes, and the French. Gustavus, Wallenstein, and Richelieu were leading characters. The peace of Westphalia

ended the war.
England had no part in this war; she had troubles enough at home. James, who succeeded Elizabeth 1603, was an arbitrary man; his son Charles was like him, and difficulties soon arose with the parliament; they demanded him to agree to a "petition of right"; war arose between parliament and the king; and he was beheaded. Cromwell was made Protector.

There were great religious dissensions; in England during the first part of the century the Puritans were driven from England and settled at Plymouth. The great Plague and the Great Fire made much havoc. In 1688 the Stuarts left for good—this goes by the name of the glorious revolution.

The Dutch rose to prominence in a war with England; and they were very prosperous, 1631-1672. England then got France to join her against them. A great Dutch character appears in the prince of Orange. France become noted by the ministry of Richeleu and Cardinal Mazarin; Louis XIV, appears as a great warrior and also friend of literature and the arts. warrior and also friend of literature and the arts.

Louis married Madame de Maintenon; through her influence he revoked the edict of Nantes, which tolerated all religions, and forbade the exercise of the Protestant religion; 200,000 people left the kingdom. His cruelties to the Protestants led to the league of Augsburg; war came on, and lasted ten years; it was ended by the peace of Ryswick.

In Russia, Peter the Great attempted to bring the people out of ignorance and barbarism.

In Poland, Sobieski delivered Vienna from the Turks-a wonderful event.

In America this is the period of settlements, the principal points were Jamestown, New York, Plymouth, Providence, Quebec, and Elizabeth; the whole coast began to be dotted with small towns, Wars with the Indians followed in New England.

There were many great men on the stage during this century. Shakespeare, Cervantes. Raleigh, Kepler, Wallenstein, Lope de Vega, Rubens, Sully, Galileo, Harvey, Pascal, Richelieu. De Witt, Moliere, Milton, Turenne, Corneille, Conde, Bunyon, George Fox, Huggens, La Fontaine, Hampden, Racine, Dryden.

This bird's-eye view should be given brightly and clearly; a map of Europe and America should be on the walls; the teacher should use a pointer and hold the attention. Now all these names must be taken up one at a time and explained—Elizabeth, James, Peter the Great, etc.

Two months will be none too much to spend on this century; a half hour each day in talking and questioning will fix the main features firmly. An attempt should be made to show the condition of the people, the education and general culture.

#### FUDODEAN

#### AMEDICAN

EUROPEAN.			AMERICAN.			
1589—1610	Henry IV., France.	1607	Jamestown settled.			
1602- 20	Dutch seize Portuguese E. Indies.	9	Hudson River discovered.			
3- 25	James I., England.	14	New Amsterdam founded.			
9	Moors expelled from Spain.	19	Negro Slavery begins.			
9	Spain concedes Dutch independence.	20	Plymouth settled.			
11- 32	Gustavus Adolphus of Sweden.	33	Connecticut settled.			
11	English Bible.	34	Maryland settled.			
15- 29	Huguenot Wars in France.	36	Rhode Island settled.			
15- 48	Thirty Years' War.	64	England takes New Netherlands.			
24- 42	Richelieu's Ministry.	71	South Carolina settled.			
25- 41	Tyranny of Star Chamber.	75- 76	King Philip's War.			
28	Petition of Right.	80	Hennepin on Upper Mississippi.			
29	Pacification of Nısmes.	82	La Salle on Lower Mississippi.			
31- 72	Holland's Rise to Power.	82	William Penn in America.			
34	Ship Money Controversy.	86— 89	Tyranny of Andros.			
40- 53	Long Parliament.	89- 97	King William's war.			
42- 62	Mazarin's Ministry.		DEATHS OF EMINENT MEN.			
42- 51	Charles I. beheaded.	1616	Shakespeare.			
53- 58	Cromwell.	16	Cervantes.			
60- 85	Charles II.	18	Raleigh.			
66	Great Fire in London.	26	Bacon.			
74- 96	John Sobieski.	30	Kepler.			
79	Habeas Corpus Act.	40	Rubens.			
82-1725	Peter the Great.	42	Galileo,			
83	Vienna saved by Sobieski.	57	Harvey.			
85- 88	James II.	73	Moliere.			
86	League of Augsburg.	74	Milton.			
88	Revolution.	88	Bunyan.			
88-1702	William and Mary.	99	Racine.			

# Supplementary.

## A Study of Air.

MISS MARY A. SPEAR, Quincy, Mass.

Take a long breath. What did you breathe in? What is all around us? Can you see air? Fan yourself. Can you feel air? Move your hands quickly to and fro. Can you feel air when you are doing this? Do you feel air passing through your nose while you breathe? Do you feel air when it is still or when it is moving? Did you ever feel a breeze or light wind? Did you ever hear one? You do not see air, but you can feel it and hear it when it is in motion. Try to feel and to hear it when it is quiet.

Here is a goblet. Do you say it is empty? No, it is filled with air. Tell or show some other places in this room where there is air. Look at the cells of a soonge: look amongst the waste

air. Look at the cells of a sponge; look amongst the waste papers in a scrap-basket; look at this thimble, is there any air in it? Find some place where there is no air. Dora says there is no air in the goblet now, because she has filled it with water She thinks water has crowded out the air. Is she right?

Pour the water from the goblet and wipe the glass till it is dry; then turn it upside down. Is there anything in it now? Do you think there is as much air in it now as when it was turned up-

think there is as much air in it now as when it was turned upward? Paul says he can turn a goblet so as to pour out water,
but air cannot be poured out in the same way.

Here is a deep pan nearly filled with water; the water is deeper
than the cup of the goblet. I place the dry, inverted cup on the
surface and press it downwards Slowly and steadily it goes
down till we hear it touch the bottom of the pan. Is it filled
with water? No, because close down to the bottom we see a
dark band which shows us the height of water. Why did it not
rise higher? "Because air is in the cup above it," says Maud.
Why does the air not go out, as when Dora filled the goblet? "It
cannot get out; water is below and glass above it." "When
Dora poured a stream of water into the glass, it pushed out the
air as fast as the water went in."

Rufus thinks we may be mistaken about the goblet in the pan;
it may be filled with water but we do not see it. Edna thinks so,
too. I take it out of the water, wipe it clean and dry, then fasten

it may be filled with water but we do not see it. Edna thinks so, too. I take it out of the water, wipe it clean and dry, then fasten a strip of very thin paper to the bottom of the cup. The length of the paper equals the depth of the cup. A button is fastened by a thread to one end of the paper. Why is it put there? To give a little weight to the paper so it will not float. Placing the inverted goblet in water and pressing down firmly, it touches the bottom of the pan. Now Rufus may lift it out carefully 'to see whether all the paper is wet. "No, it is wet only a little way from the bottom, so I know the water did not reach far up into the cup." Wh t could have been above the water? Air was the cup." What could have been above the water? Air was there. Water crowded the air into a smaller space, but did not go through it, and the paper that was in the air was not wet.



Alan wants to know whether the air might not be out of the Alan wants to know whether the air might not be out of the goblet, and thus leave nothing between the water and the place where the paper was fastened to the cup. Can there be nothing in any place, Alan? Did you ever blow soap bubbles? What is inside a bubble? What is your breath? You say you breathe in air, and so you must breathe out air; it is air that fills the bubbles. Look as I tip the goblet a little, keeping its rim below the water. What do you see coming up? What is inside these bubbles? Where does the air inside them come from? If I let it out of the goblet, it must be some which was above the water. Now of the goblet, it must be some which was above the water. Now lift the glass out and look at the paper inside. More of it is wet than before; that shows us the water went higher in the cup than before; yet part of the paper is dry and there was some air above the water. Water and air are not in the same place.

More than three hundred years ago, a man found out just what you have been learning to-day. He thought a vessel, shaped like the cup of this goblet or like a bell, could be made large enough to hold a man; then a boat could carry it out to sea till it came to deep waters where it was to be dropped overboard, and he would

go down to the bottom of the sea. He would have a seat near the top of the bell, and a strong glass window there so he might look out into the water far below the bottom of the boat. He of iron; it was made large enough to hold them and heavy enough to sink in water when it was thrown overboard. When it was finished, Emperor Charles V. and thousands of people gathered at Toledo in Spain to see these men who went down under water and came up again without being wet. Since that time better diving-bells have been made. They are used a great deal; people can go down in them to take things of value from wrecked and sunken vessels. Diving-bells are used when building walls under water, or when laying a strong foundation for a wharf or

Ira thinks pure air in a diving-bell will not last long, and if a man cannot have good air to breathe he could not live long under the water. Diving-bells have tubes reaching from them to the boat so that fresh air can be sent down to the man in the bell.



# Literary Round Table.

(From the Advance Sheets.)

ARRANGED BY THE AUTHOR OF "Preston Papers."

FOR COMMENCEMENT EXERCISES.

[CONTINUED FROM LAST ISSUE.]

JULIA WARD HOWE,

Battle Hymn of the Republic.

"In the beauty of the lilies Christ was born across the sea, With a glory in his bosom that transfigures you and me; As He died to make men holy, let us die to make them free." Recite.—(Above poem entire.)

EDMUND CLARENCE STEDMAN.

Pan in Wall St.

" Music waves eternal wands-Enchantress of the souls of mortals!"

Stanzas for Music.

"Thy soul, . "Is as far from my grasp, is as free, As the stars from the mountain tops be,— As the pearl in the depths of the sea, From the portionless king that would wear it."

Alice of Monmouth.

"The crystal-pointed tents, from hill to hill, From vale to vale—until The Heavens on endless peaks their curtain lay A magical city! Spread to-night On hills which slope within our sight." Recite,—" The Protest of Faith."

#### BAYARD TAYLOR.

Wind and Sea.

"The sea is a jovial comrade; He laughs wherever he goes His merriment shines in the dimpling lines That wrinkle his hale repose; He lays himself down at the feet of the sun, And shakes all over with glee And the broad backed billows fall faint on the shore. In the mirth of the mighty Sea!

Kilimandiaro.

"Bathed in the tenderest purple of distance, Tinted and shadowed by pencils of air, Thy battlements hang o'er the slopes and the forests Seats of the gods in the limitless ether, Looming sublimely aloft and afar.

Autumnal Vespers.

"Our life is scarce the twinkle of a star In God's eternal day." Recite.- "Hassan Ben Khaled

JOHN TOWNSEND TROWBRIDGE.

Midwinter.

" All the valley is shut in By flickering curtains, gray and thin." Recite.-" The Vagabonds.

N. P. WILLIS.

Lady Jane.
"The world well tried—the sweetest thing in life Is the unclouded welcome of a wife."

Recite.—" Love in a Cottage" or one of his sacred poems.

## "WHERE SHALL I GO THIS SUMMER?"

# The School Journal 1893

# SUMMER TRAVEL GUIDE.

\* \* \*

As a large proportion of the 400,000 educators of the country travel during the long summer vacation of two months duration, it is intended, in these pages, to offer to them valuable information concerning routes and points of interest. Further information will cheerfully be given, if possible by letter: enclose a stamp for the reply.

THE COLUMBIAN EXPOSITION at Chicago, that opened May 1, will be the central point for a vast number of teachers

THE COLUMBIAN EXPOSITION at Chicago, that opened May 1, will be the central point for a vast number of teachers this summer. It is believed that every teacher who visits Chicago will be provided for at reasonable rates; full information will be found on this point in the columns of The School Journal, which has appointed a special correspondent there to gather it. For Eastern teachers there will be excursions to the Yellowstone Park, Alaska, &c.; for Western teachers to Niagara Falls, New York, &c.

While the NATIONAL EDUCATIONAL ASSOCIATION lays aside its meeting this year, the members will form themelves into an Educational Congress to be held in Chicago, commencing July 25, a most important affair. This will absorb the annual meeting of the National Educational Association. The GLENS FALLS SUMMER SCHOOL will be held in Chicago this summer. The MARTHA'S VINEYARD SUMMER SCHOOL will be held in its charming seaside home. CHAUTAUQUA is always an attractive point for teachers. The BAY VIEW CHAUTAUQUA in Michigan is becoming a renowned place; it has a wonderfully bracing atmosphere. EUROPEAN TOURS.—In spite of the attractions at Chicago there will be a great tide of European travel this year.

This is but a part, for other meetings consult the columns of THE SCHOOL JOURNAL.

# The Pennsylvania Railroad

was incorporated in 1846, and chartered in 1847, to build a line from the Harrisburg and Lancaster route to Pittsburg or Brie. The State system of Transportation, built between 1838 and 1834, at a cost exceeding \$14,000,000, consisted of a railway from Philadelphia to Columbia, 82 miles; a canal thence to Holidaysburg, 172 miles; the Portage Railway, across the Alieghany Mountains to Johnstown, 36 miles; and the railway thence to Pittsburg, 104 miles. This route resulted in great benefit to the sections through which it passed, but it was a slow, costly and complicated system, and proved unremunerative to the State. For years the route between Philadelphia and Columbia was served only by horse-cars, πaking the transit in nine hours, with relays every twelve miles. The superior facilities offered by New York and Baltimore threatened to leave Pennsylvania out of the race as a competitor for Western trade, and therefore local patriotism was highly stimulated to construct a new and first-class route across the State. The project was advocated by the press and in public meetings; and committees went from house to house asking sub-With the funds thus raised, and under the wise direction scriptions to stock. of Chief Engineer J. Edgar Thompson, the Pennsylvania Railroad began its construction works in 1847, between Harrisburg and Lewistown; and in 1854 the entire route, from Philadelphia to Pittsburg, went into operation. In 1861, after a contest of six years, the company bought the State lines, for \$13,570,000 Mr. Thompson held the presidency of the company from 1852 until his death, in 1874, when he was succeeded by Col. Thomas A. Scott, who had been for twenty-four years connected with the company, and had been vice-president since 1860. After constructing its magnificent trunk line across the Keystone State, the company prolonged its routes farther westward by securing control of several lines to the great trade-centers of the West; gained an admirable entrance to New York by acquiring the United New Jersey lines; found an outlet at Baltimore by getting control of the Northern Central Railroad; completed and opened the Baltimore & Potomac line, to Washington; and came into possession of numerous minor routes.

The New Jerse, part of the Pennsylvania system includes the plant of the United New Jersey Railroad and Canal Companies, leused in 1871 for 999 years, at a deservedly high rental. This confederacy was formed in 1831, by the practical unification of two companies chartered a year before—the Delaware & Raritan Canal and the Camden & Amboy R ilroad, both of which were finished in 1834. Two years later the United Companies got control of the Philadelphia & Trenton line (opened in 1834), and in 1867 they consolidated interests with the line of the New Jersey Railroad and Transportation Company from New Brunswick to Jersey City. The section from Jersey City to Newark was opened in 1834, and for some years was used only by horse-cars. In 1836 st reached Rahway: and in 1860 its trains arrived at Philadelphia.

et reached Rahway; and in 1830 its trains arrived at Philadelphia.

The new passenger station at Jersey City is larger than the Grand Central Depot in New York, and has a length of 653½ feet, with a width of 256 feet, and a height of 112 feet. It is reached from New York by the steam ferry-boats of the company, running from Cortlandt Street and Debrosses Street. The Pennsylvania Railroad has already bridged West Street at their Cort landt Street Ferry, and is rapidly putting into service a fleet of double-deck ferry-boats, so that eventually passengers will be able to pass from Cortlandt or Desbrosses Streets to the upper decks of the ferry-boats, above the confusion of West Street, and thence on the same level to their trains in the Jersey City Station.

The Pennsylvania Railroad has one of the most perfect equipments in the world, with heavily ballasted road-bed, steel rails, track tanks, block signals and the very best of rolling stock in all forms. Every successful device known to modern railroad science has been adopted and utilized by this vigilant and wealthy corporation. The discipline of this great army of officials and men is of such an admirable character that the Pennsylvania has long served as a sem-

inary for the most efficient railroad men in all parts of the country. The grand oute westward by the Pennsylvania line from New York and Pailadelphia to Cincinnati and Chicago, Indianapolis and St. Louis, and remoter points in prairie land, is one of the most interesting and diversified on the continent. It leads across the richest and most densely settled part of New Iersey, pag-Newark, New Brunswick, Trenton and other historic cities; and for a long distance down the garden-like valley of the Delaware. The great terminal at Philadelphia is the model railway station of the world, vast in area, impressive in architecture and equipped with many conveniences devised by the most ingenious minds. From the City of Brotherly Love the traveler southward-bound passes down across the State of Delaware and through Wilmington, its metropolis, and on to the great city of Baltimore, and to Washington, the capitol of the Republic, where connection is made with the great Southern lines for the lower Atlantic and Gulf States. The traveler westward-bound from Philadelphia traverses a rich and historic country, by quaint old Lancaster and picturesque Harrisburg, and crossing the broad Susquehanna River ascends the lovely glens of "The Blue Juniata." At Harrisburg the track is 310 feet above the sea, at Lewistown 488, at Tyrone 885 and at Altoona, 1,168. Here begins the wonderful climb of the Alleghany Mountains, and the track attains its highest point at v, 168 feet above the sea, where it passes through a tunnel, 3,612 feet long, and reaches the western slope and the ravines descending toward the Before reaching the tunnel, the train swings around the wonderful Horse-shoe Curve, a marvel of engineering skill, and overlooking dim blue leagues of valleys and mountain ranges. At Johnstown, of tragic memory, the has descended to 1,184 feet above the sea, and at Pittsburg its elevation is only 748 feet. At this point, the famous iron and steel city, connections are for all parts of the interior and Western States, and the through cars pass directly on to the rails which shall bear them indefinite distances along the path of the Star of Empire, across the fruitful plains of the prairie States, and even beyond the solemn walls of the Rocky Mountains and the Sierra Nevada.

Never before and nowhere else has better provision been made for the luxury of travelers. On these great routes run trains on which, while flying at the rate of forty miles an hour, the weary voyager may undress and retire to rest, in a curtained alcove or an enclosed state-room; and sleep in a comfortable bed while gliding over 500 miles of American land. At morning he may arise and refresh himself by ablutions in running water, with fresh clean towels; or take a full bath in a bathut; or be shaven and shorn by the train barber. At meal-times, the tables are set in the dining car, as daintily equipped and served and as richly supplied as in a good hotel; and a leisurely repast is enjoyed, while the train sweeps on, at nearly a mile a minute, up the Susquehanna or Juniata Valley. When one grows weary of looking out at the changing landscape, through broad windows of transparent plate glass, he may walk forward securely through the cars and their vesibuled connections, to the library-car, with its fine shelves of books and periodicals, and its desks, all supplied with stationery, for people who want to write letters or telegrams. The train also has its comfortable lounging places for smokers, who may purchase their nicotinous sedatives there. The accustomed pains of travel have thus been replaced by a triumphal course of pleasure, reaching from New York to Chicago, or St. Louis, or San Francisco, or Mexico; and the hospitality and good cheer, the freedom and comfort of the Empire City, project themselves over the entire continent.

Wonderful system, admirable discipline, and perfect mastery of all departments of the science of railroading characterize the Pennsylvania Railroad in all its history, development, and present operations, and place it among the preeminent corporations of the world.

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# American Routes for Foreign Tourists.







During the present season it is anticipated that many foreign visitors will come to our country to see the sights, not alone of our World's Columbian Exposition but the wonderful country which is the wonder of all lands and peoples.

To all such the country will extend a welcome, and they will go home with new ideas of what a free Nation is; a government of the people, for the people, and by the people.

for the people, and by the people.

Those who enter our land from the Atlantic Ocean will seek, doubt-less, to make a I reasonable speed to the special object of their visit—the World's Columbian Exposition at Chicago. There are numerous routes, each claiming advantages which should attract and will attract tens of thousands of patrons, and all will serve them well.

One of these routes deserves special mention in some of its advantages to foreign visitors. We refer to that popular highway of American travel—The West Shore Route—whose line traverses beautiful and historic grounds amid scenery that enchants and instructs. Taking the west bank of the famous Hudson River it seeks the pastoral scenery of the west side of the Palisades for the first thirty miles, a brief run through a tunnel, and then bursts upon the view such a "waterscape" as seldom astonishes a tourist. The picturesque Hudson River—which we crossed

on leaving New York—is before us again, and its sides are hemmed in by majestic mountains, and cultivated fields, and beautiful towns, aggregating a view or series of views of the "never-to-be-forgotten" kind. We give herewith a view from the track of the WEST SHORE RAILWAY in this vicinity.

Before the astonished and chaimed traveler has recovered from this gladsome surprise the train has reached West Point, where are educated the youths who are to enter the military service of the Nation, and its buildings, grounds, and historical surrounding are well worthy a visit and

But ten miles further and we are at Newburg where is located the "Headquarters of General George Washington," a building in which he lived and used as army headquarters during a portion of the Revolutionary War of 1776-1781, and it is kept open for the visits of the people, and many historical relics of the Revolutionary War are on exhibition.

Journeying North we have the majestic Hudson on our right, and the towering heights of the Catskill Mountains on our left, and the Capitol of the State--Albany-is reached.

From this point westward, the route is through the beautiful pastoral valley of the Mohawk and Genesee—with what Milton calls, "Sweet interchange of bil and valley, river, woods, and plains"—and at Buffalo we first see the blue waters of Lake Erie; and whirling along the banks of the Niagara River we come upon that goute sight, Niagara Falls, which all forcign visitors should surely see.

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In the healthiest and most delightful region accessible to New York; 2,000 feet above the sea. It gives a list of over 950 hotels, farm and boarding houses, with rates of board, distances, &c., &c. Can be had free. In New York at Nos. 11, 165, 171, 212, 371, 944, 1,323 Broadway, 737 6th Av., 134 East 125th St., 264 West 125th St., 251 Columbus Ave., ticket offices foot of Franklin and West 42d Sts. In Brooklyn at 4 Court St., 860 Fulton St., 215 Atlantic Ave., 98 Broadway, 253 Manhattan Ave., Greenpoint, or to J. C. ANDERSON, Gen'l Passenger Agent, 56 Beaver St., N. Y.

On May 29 and 30 excursion tickets for one fare will be sold at 371 Broadway and ferry offices, giving an opportunity of personally selecting a Summer home and also enjoying a day's fishing in this delightful region. Tickets good returning on May 31

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A 40-page folder, with map on one side, 16x36 inches, printed in three colors: reverse side printed in two colors; briefly describes and illustrates the principal health and pleasure resorts of New York, New England, and Canada, including approximate time and rates of fare from New York, and from Buffalo and Niagara Falls. The most valuable map of this region ever published. Sent free, The most valuable map of this region ever published. postpaid, on receipt of two 2-cent stamps.

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A 40-page folder, with map on one side, 16x36 inches, printed in four colors and on the reverse side, type matter, printed in two colors; the whole beautifully illustrating the territory tributary to the Harlem and Hudson Divisons of the New York Central, including the Catskill Mountains on the West, Saratoga and North Adams on the North, and the Litchfield and Berkshire Hills on the East and Northeast This is believed to be the finest map of this region ever published. Sent free, postpaid, on receipt of two 2-cent stamps.

#### Health and Pleasure on America's Greatest Railroad.

"HEALTH AND PLEASURE" is the New York Central's Tourist Guide to the great Summer and Winter resorts of America.

It contains over 400 royal octavo pages; is beautifully illustrated with more than 100 engravings, half-tones, and numerous

maps. Illuminated cover.

This is the most valuable book of its character ever issued, and represents a variety of useful information, both for the tourist and home-seeker. It embraces over one thousand tours, covering all the principal resorts of the United States, Canada and Mexico; also an interesting chapter on Japan Its lists of hotels and boarding-houses taking Summer boarders is very complete, and forms an important feature of the book. Ready May 15th. Sent free, postpaid, on receipt of five 2-cent stamps.

#### The Adirondack Mountains.

"The Nation's Pleasure Ground and Sanitarium."

32 pages, narrow octavo. "The great North Woods," as this portion of the Empire State has frequently been called, is filled with mountains, lakes, and streams abounding with game and fish, and containing hundreds of miles of wilderness that have never been traversed by a white man. To those who love nature in her wildest forms this little book will be of particular interest. It is illustrated with a number of original engravings and illuminated cover; also a new and excellent map of this region printed in three colors. Sent free, postpaid, on receipt of two 2-cent stamps.

#### The Lakes of Central New York.

32 pages, narrow octavo. The first publication of this character that has attempted to describe the whole of this delightful region, so full of natural beauty and historic interest. Illustrated with numerous engravings; illuminated cover. Sent free, postpaid, on receipt of two 2 cent stamps.

#### Two to Fifteen Days' Pleasure Tours.

32 pages, narrow octavo, giving information regarding several hundred short pleasure tours, within the reach of all citizens of the metropolis who intend to take two or more days' vacation. Beautifully illustrated. Illuminated cover Ready June 1st. Sent free, postpaid on receipt of two 2-cent stamps.

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32 pages, narrow octavo, with numerous illustrations. A very convenient book for visitors to the World's Greatest Cataract, as it gives full information as to how one can best see the wonders of Niagara and vicinity. Sent free. postpaid, on receipt of two 2-cent

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32 pages, narrow octavo, printed in two colors. Contains just the information required by persons contemplating a trip to these famed resorts—all about the hotels, means of travel, and other special features of interest; new illustrations; illuminated cover. Ready June 1st Sent free, postpaid, on receipt of two 2-cent stamps.

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32 pages, narrow octavo, printed in two colors. The pictures tell the story; the type simply supplies useful details. Undoubtedly the best book on this region ever issued. Attractive cover. Ready June 1st. Sent free, postpaid on receipt of two 2-cent stamps.

Any of the above works will be sent by mail, postage prepaid, to any part of the United States, Canada, or Mexico, on receipt of the requisite amount in stamps.

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#### PHŒBE CARY.

#### An April Welcome.

"Come up April, through the valley, In your robes of beauty drest; Come and wake your flowery children From their wintry beds of rest. Come and overblow them softly, With the sweet breath of the South; Drop upon them, warm and loving. Tenderest kisses of your mouth."

#### Reconciled.

"G years, gone down into the past, What pleasant memories come to me Of your untroubled days of peace, And hours almost of ecstasy."

#### Dove's Eyes.

"There are eyes half defiant, Half meek and compliant." Sing—"One Sweetly Solemn Thought."

#### ALICE CAREY.

#### April.

"Ah, month that comes with rainbows crowned, And golden shadows dressed— Constant to her inconstancy And faithful to unrest.

#### Autumn

"Shorter and shorter now the twilight clips
The days, as through the sunset gates they crowd,
And Summer from her golden collar slips
And strays through stubble fields, and moans aloud,
Save when by fits the warmer air deceives,
And, stealing hopeful to some sheltered bower,
She lies on pillows of the yellow leaves,
And tries the old tunes over for an hour."

#### Here and There.

"Here is the longing, the vision,
The hopes that so swiftly remove;
There is the blessed fruition,
The feast and the fullness of love."

#### Life

"Life is so dreary and desolate!
Women and men in the crowd meet and mingle,
Yet with itself every soul standeth single."

#### Thanksgiving.

"Hope in our hearts doth only stay Like a traveler at an inn, Who riseth up at the break of day His journey to begin."

#### Nobility.

"He who is honest is noble, Whatever his fortune or birth."

#### Mercies

"He made the Sabbath shine before The work days and the care; And set about its golden door The messenger of prayer."

#### MARY CLEMMER AMES.

#### Silence

"Down through the starry intervals,
Upon this weary-laden world,
How soft the soul of Silence falls!
How deep the spell wherewith she thralls!
How wide her mantle is unfurled!
Of all our loving Father's gifts,
I often wonder which is best.—
And cry: Dear God, the one that lifts
Our soul from weariness to rest,
The rest of Silence—that is best."

#### To-morrow

"A shining isle in a stormy sea,
We seek it ever with smiles and sighs,
To-Day is sad. In the fair To-Be,
Serene and lovely, To-Morrow lies."

#### Something Beyond.

"Something beyond! The immortal morning stands Above the Night; clear shines her prescient brow; The pendulous star, in her transfigured hands, Lights up the Now."

### Words for Parting.

"A sweeter, sadder thing My life, for having known you; Forever with my sacred kin My soul's soul I must own you.

Forever mine, my friend, From June to life's December; Not mine to have or hold, But pray for and remember."

#### JULIA C. R. DORR.

#### Three Days.

"To-Morrow! Never yet was born In earth's dull atmosphere a thing so fair— Never tripped, with footsteps light as air, So glad a vision o'er the hills of morn O, fair To-Morrow! what our souls have missed

Art thou not keeping for us, somewhere, still?
The buds of promise that have never blown—
The tender lips that we have never kissed—
The song, whose high, sweet strain eludes our skill—
The one white pearl that life hath never known?"

#### Outgrown.

"Nature never stands still, nor souls either. They ever go up or go down."

#### To-Day.

"What dost thou bring to me, O fair To-Day, That comest o'er the mountains with swift feet?"

#### LYDIA HUNTLEY SIGOURNEY.

#### Niagara.

(1) "Flow on forever in thy glorious robe Of terror and of beauty."

(2)

"God hath set
His rainbow in thy forehead; and the cloud
Mantles around thy feet. And He doth give
Thy voice of thunder power 'o speak of Him
Eternally, bidding the lip of. an
Keep silence, and upon thy rocky altar pour
Incense of awe-struck praise."

#### WILLIAM WINTER.

#### Queen's Domain.

"Ambition has but one reward for all: A little power, a little transient fame, A grave to rest in, and a fading name."

#### Light and Shadow.

"Life is arched with changing skies;
Rarely are they what they seem;
Children we of smiles and sighs—
Much we know, but more we dream."

#### Emotion of Sympathy.

"That some mighty power controls the whole,
A secret intuition tells the soul."

Recite.—"Murmur of the Rain."

#### RICHARD HENRY STODDARD.

#### Hymn to the Sea.

"The Heavens look down and see themselves in thee And splendors, seen not elsewhere, that surround The rising and the setting of the sun Along thy vast and solitary realms. The blue dominion of the air is thine, And thine the pomps and pageants of the day, The light, the glory, the magnificence, The congregated masses of the clouds, Islands, and mountains, and long promontories, Floating at unaccessible heights, whereto Thy fathomless depths are shallow—all are thine."

#### The Squire of Low Degree.

"What is life when love is flown?
We breathe, indeed, we grieve, we sigh,
And seem to live, and yet we die;
There is no life alone."

#### November.

"The wild November comes at last Beneath a veil of rain; The night wind blows its folds aside, Her face is full of pain. The latest of her race she takes The Autumn's vacant throne. She has but one short moon to live, And she must live alone." The Children's Prayer.

"Children are the keys of Paradise.
They alone are good and wise,
Because their thoughts, their very lives are prayer."
Recite—" Compensation."

CHAS, G. LELAND.

The World and the World.

"If all the world must see the world,
As the world the world hath seen,
Then it were better for the world
That the world had never been."

The Return of the Gods.

"Thought is the measure of life."

Spring.

"Uprose the wild old winter-king
And shook his beard of snow;

'I hear the first young harebell ring;
'T is time for me to go.'"

EUGENE FIELD.

Dedication of a Volume.

"A little bit of a woman came
Athwart my path one day:
So tiny was she that seemed to be
A pixy strayed from the misty sea,
Or a wandering greenwood fay."

(CONCLUDED NEXT WEEK.)



## America's Tribute to Columbus.

By I. M.

"In fourteen hundred and ninety-two
He sailed across the ocean blue;"
In eighteen hundred and ninety-three
He carries the mail for our great countree.

Four hundred years he had to wait, For this honor conferred so wondrous great; This reward so grand, in our land so free, To carry the mail in our great cour tree!!

Our Congress thus honors its illustrious dead. But of all our heroes stamp Columbus ahead, While each pet of the past must recede, and see Brave Christopher supreme, in our great countree.

Columbus was brave, Columbus was bold, Yet a sad heart he carried when he was old; But forgotten the past when all nations shall see How he carries the mail for our great *countree*.

How humbly he wandered from door to door, Till even his friends wished to see him no more; But now he is welcomed by all, you'll agree, When he carries the mail for our great *countree*.

In vain he went boldly from king to king, 'Twas only a queen who knew a good thing; But now, kings and queens will all wish to see The land that he found, our great countree!

How slowly he sailed, with his vessels three, Through the trackless waves of an unknown sea; But now he rails swiftly in freedom and glee, For he carries the mail of our great countree.

He looked at the stars in their fathomless space; Their guidance compelled him to find a new race, Where a new world was waiting, this land of the free, Where the stars and stripes wave o'er our great countree.

Boys! boys! do be valiant, be *patient*, be true, You who live in the land of the "red, white, and blue," For if worthy of honor *unknown* comrades *may* see How *you* carry the mail, in our great countree.

Refrain.—Stamp, boys, stamp with care,
For see 'tis Columbus, you're stamping there.

[The above verses should be used to close a talk on the new Columbian postage stamps. After the teacher has read and the class enjoyed it, as a rhythmic summary of the lesson, half a dozen of the smaller boys may be selected to commit it. They should stand in line and recite in concert. Each should hold a letter, bearing one of the new stamps. Every time they recite "He carries the mail of this great countre," each should hold up his letter, turning it toward the audience and pointing with the right hand idex finger to the stamp.]

# Editorial Notes.

We have in view a series of articles on "Local Flora by Drawing." Drawing as a means of study is not yet generally appreciated. It is a mode of stating one's judgments. No act of observation is complete without a judgment and no judgment is sufficiently clear until put into some form of statement. Drawing is one of the most telling modes of statement at our command. As an assistant to observation, then, its value must go unquestioned. Indeed the public school should look upon drawing chiefly as clarifying and conveying ideas, and thus torming an indispensable means of observation and expression. It is of great use in the study of the natural sciences. We hope to see its true function in education more rapidly developed then it has been. No one will call it a fad when it is used as a language. An article in our issue of May 6 gives some useful hints for the study of birds by drawing.

A former contributor writes: "I do not receive The Journal. I supposed it was sent free to contributors." The rule adopted is a simple one; every contributor receives free the number of The Journal containing his article; if he wants to have The Journal to read regularly he subscribes for it. This rule is followed by all first-class journals.

One of the men that has made the world better is Mr. H. O. Houghton, the Houghton of the great publishing house of Houghton, Mifflin & Co., Boston. Well are remembered the interviews with him in the early and trying years of The Journal, for he was full of encouragement; he did not discourage that sanguine belief that the schools might be greatly improved. He was a man of ideals himself in regard to the printing of books; graduating from the university of Vermont by great sacrifices, he established a printing office in Cambridge; it soon become known as the Riverside Press. Then he became a publisher and all the world knows what has been done by the firm of which he is the inspiring head. What excellent books! How excellently made! Mr. Houghton has just reached his seventieth year, and is to be congratulated on the services he has rendered to the world.

A teacher writes: "When —— was superintendent there was a great interest felt in reading educational papers; a good many teachers began to lay the foundation of educational libraries. A great change has taken place; —— is a good man, but the educational wave has subsided; the teachers are falling back into their old ways."

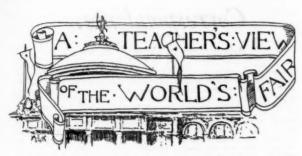
It certainly is remarkable how much a live superintendent may do, and how little a dead one may do—and the dead man be a "good man," too. "He is a good man but a poor superintendent." We are reminded of a splendid church here where only 75 could be counted on a fine Sunday; a new man came and in a year 400 are seen there; it was not eloquence but leadership that did it. Evidently there are few men possessing educational leadership who get in as city superintendents.

Mr. E. C. Branson, who contributes this week an article on "The Purpose of Problems," is director of the normal department of the Georgia state normal and industrial college. The psychology of number has received some intelligent attention in this institution. Teachers who spend three-fourths of the time allotted to number on mere drills have much to learn in this direction. The value and function of problems and their explanation, illustration, and even composition, by the pupil, offers a subject of study to which many would do well to turn their attention. "An ounce of development and a pound of drill" is quite out of the line of progress.

Pres C. K. Adams, of the State university of Wisconsin, places preparation for college as a secondary object of a high school to that of completing a common school education. THE JOURNAL has always taken this stand. The lower schools are not maintained for the benefit of the higher institutions, but for the benefit of the pupils, and most of all for those who step out, all along the line. The high school owes a greater duty to those among its students who will not enter college than to those who will.

The following words from the Albany (N. Y.) Journal may be putting on a little too much dark paint, but then they contain some sound truth that is well worth pondering over:

"Worst of all is the sarcastic teacher. Her tongue is like that of the serpent and too often stings to death the child's natural loving-kindness. Many a man on his death-bed may forgive all his enemies, and not be able to forgive the woman with the envenomed tongue who poisoned the happiness of his boyhood. Sarcasm is a weapon to be used among equals, not to be directed toward a child."



The question of Sunday opening, long a vexatious one, has now reached a white heat. May 7 was the first Sunday of the fair season. On that day sixty thousand people congregated at the different gates only to be denied admission. Nevertheless there were some fifteen thousand workmen within the enclosure installing at the control of the ing exhibits at the usual week-day pace. Man has undertaken to arbitrarily limit the Divine definition of "rest."

Those congressmen who forced the closing agreement may Those congressmen who forced the closing agreement may have been loyal to their own petty constituencies, but they were false to that larger patriotism by which they were beholden to the whole country and to all mankind. As it is, the immediate consequence of their weakness is a direct menace to life and limb in Chicago; and although the teeming streets will lead to closely barred gates at the fair, they will at the same time be lined with with over solones. wide open saloons.

It is by no means a final decision, however, that the fair shall It is by no means a final decision, however, that the fair shall close on Sunday. Complications are arising which may give the directors a discretionary right to ignore what are perhaps illegal orders. As an indication of the warmth of local opinion, it may be mentioned that a prominent Chicagoan, holding ten thousand proxies of exposition stockholders, is going to attempt on legal grounds to prevent the further closing of the gates. The people of Chicago almost to a man, including the clergy, wish him Godspeed. There is a strong sentiment among workmen for making Saturday their weekly rest-day and working Sunday instead as the only scheme that can give them any chance at all at the wonders of the fair. It is to be hoped they may not be driven to this means of attaining religious liberty. means of attaining religious liberty.

#### THE LA PORTE EXHIBIT

attracts special attention. The work is shown chiefly in strongly made books swung vertically on the walls. There are also separate sheets and photographs showing class-room interiors. The language work has been bound, uncorrected, and lies on shelves along the well. along the wall.

By the arrangement of the material, Supt. Hailmann has shown the sequence of color and design from the kindergarten to the close of the high school.

The first grade paper work begins with geometric designs in experiments with the primary colors. This is followed by similar work with shades, and the colors of the spectrum are arranged. lar work with shades, and the colors of the spectrum are arranged. Some of this paper work is individual and some following is "social"—the individual brings his own discoveries to the table used for this social work, and, with several others, works out a new design. (There is a great point in this. Individuality, unduly emphasized, makes egotists and hermits.)

From the paper pasting he passes to water color design. The pattern is outlined by him on "netted" paper—marked in halfinch squares. This netted ruling is discarded after the fourth grade. The designs show the growth in inventive power and

The designs show the growth in inventive power and color combination.

In the upper grades the teacher has given the fundamental unit, or theme for the design, and upon that the pupils have individualized. The sets of these designs are arranged to show this individuality in each, yet based upon the given theme. The aim

individuality in each, yet based upon the given theme. The aim has been to give the pupil an initial tendency without harnessing his individuality. The result is great freedom of treatment.

The second scheme shows the transitions from the purely natural to the finished conventional. First, various leaves and flowers are pasted in orderly and related groupings. Following these, similar groups are painted in water color. Finally these motives are conventionalized and in this stage some remarkably fine high school work is shown.

The written work is on thesis paper, simply bound. That of

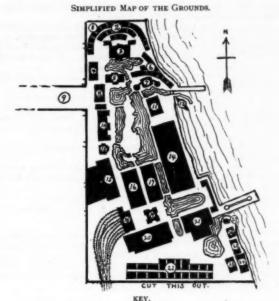
The written work is snown.

The written work is on thesis paper, simply bound. That of the primary is language work drawn directly from science observations in botany, etc. The grammar written work embraces form study, natural history, ethics, geography, and history. The papers are the expressions of the pupils. The high school papers are in history, literature, and science, and are marked "uncorrected". rected.

It may well be urged here that all school exhibits should be presented "uncorrected." As a matter of lact, few of them are.

Few of them present the unvarnished *child*.

Mrs. Hailmann's kindergarten exhibit is not yet installed and will receive attention at a later time,



- Eskimo village. State buildings. Art building. California building. Illinois building.

- 5. Illinois building.
  6. Foreign buildings.
  7. Fisheries building.
  8. Women's building.
  9. Midway Plaisance.
  10. Horticultural building.
  11. United States Gov't building.
  12. Man of War Illinois.
  13. Choral building.
  14. Man'f'rs and Liberal Arts building.

- 15. Transportation building.
  16. Mines building.
  17. Electricity building.
  18. Terminal building.
  19. Administration building.
  20. Mechanic Arts building.
  21. Agriculture building.
  22. Stock exhibit.
  23. Anthropological building.
  24. Forestry building.
  25. Shoe and Leather building.
  26. Krupp Gun exhibit.
  27. Monastery "La Rabida,"

#### SOME MASSACHUSETTS SCHOOLS,

Massachusetts has one of the handsomest and most elaborate exhibits in the gallery. The work is arranged as a state system culminating in the Normal Art school. Higher institutions are detached. The various city exhibits are thus divided and distributed into their sequent departments.

The kindergartens sent a great array of stick laying, paper cutting, and pasting, with fine results in color combination. There is object representation by worsted sewed outline filled in with dry color; sewed designs, pattern and color combinations original with the children; pencil picture stories.

The state drawing system approaches uniformity. It is not in direct accord with any of the cut and dried marketed systems. Of these the school men fight shy. The work is shown in three

Of these the school men fight shy. The work is shown in three parallel courses which develop toward the latter end into (a) construction drawing; (b) designing; (c) representation.

All three courses begin in the first grade in stick laying and paper cutting and pasting. The design work of the middle grades shows some exquisite color effects.

The construction drawing of the Springfield schools consists of

The construction drawing of the Springfield schools consists of working drawings used by pupils in their manual training work. The same instruction is given to both sexes.

#### THE MANUAL TRAINING EXHIBITS.

Spring field.—Geo. Kilbon's system. Models mounted on six plates."

Plate I.—A course in knife work for grades 6—8. Done in ordinary school-room, desks protected by removable covers. Time, forty five minutes weekly. Shows three sequences of work.

(a) Line cutting in thin wood. (b) Line or surface carving. (c) Three-

dimension work; solid carving.

Plate II.—Course in elementary woodwork for 8th and 9th grades. Special room. Individual benches. 8th grade one and one-half hours fortnightly; 9th grade same weekly.

Problems consist of various exercises, as nailing, gauging, sawing, etc., all on prepared material. Culminating in produced objects.

Plate III.—Course in joinery. First year high school. One and one-half hours daily. Follows work on plate II. Begins with unapplied joints, culminates in produced objects.

Plate IV.—Course in turning. High school, first year, latter part. One and one-half hours daily. As above, from the "abstract" to the embodied exercise.

Plate V.—Course in carving.

Plate V.—Course in carving.

One and one-half hours daily.

Exercises in straight and curved line carving, in simple geometric patterns.

Followed by flower reliefs, picture frames, etc.

Plate VI,-Course in pattern making. High-school boys, Latter part of second year. One and one half hours daily.

Sequent to courses 2—5.

Boston—(1) Eight plates showing graduated course in woodwork. Beginning with thin wood and immediate production (as opposed to preliminary exercises). Two-dimension work with fret saw. Several Nääs Sloyd models adopted. The final aim of the work, the evolution of the working drawing.
(2) Eddy's system. Three plates showing advanced work for

high schools.

(3) A course in high school machine shop work is also shown.

(4) The Horace Mann school for the deaf exhibits in three plates the course of wood-work there use 1. Much like sloyd. Exercises not so carefully graduated. Some chip carving.

(5) Larsson's sloyd system (not yet installed). Normal Art School—Fine exhibit of advanced work in modeling scalesters pairing and design.

ing, sculpture, painting, and design.

Waltham—Exhibit of the Waltham Manual Traning school under Everett Schwartz. Modified sloyd. Course in light forge work. Photographs showing pupils at work.

Effort will be made later to notice other Massachusetts schools.

WALTER J. KENYON.

The total educational exhibit, exclusive of other groups in the Department of Liberal Arts, occupies about 225 thousand feet of gross space, the equivalent of a building one thousand feet long, and two hundred and twenty-five feet wide. The location, in the great building between the lake and the lagoons, is admitted to be the best in the exposition.

The Henry County (Ga.) Weekly is responsible for this item: The other day the writer met a very small "cuffee" carrying a very large armful of books, which brought forth the inquiry:

"Going to school?"

" Yas, sar, boss.

"Yas, sar, boss."
"Do you study all those books?"
"No, sar, dey's my brudder's. I'se a ignorance kind er nigger side him, boss. Yer jest ough'er see dat nigger figgerin.' He done gone an' clean cyphered thro' addition, partition, substraction, distraction, abomination, justification, hallucination, derivation, are seation, around adoption. Lemme tell you what's tior, creation, amputation, and adoption. Lemme tell you what's de God's trufe, white man, dat dere brudder er mine is sho got er double-story head on 'im w'en it comes ter cackilatin'."

The Herald, of Grand Rapids, Mich., writes that out of 104 persons who petitioned the board of education to abolish the training school of that city only two had actual knowledge of the merits of the school. The school was not abolished, and yet there was not a solitary petitioner for its continuance.

A Western subscriber asks: Why does ice sometimes form dur-

ing hot weather in calm, clear nights?

It does not form down East here in hot nights, not by any manner of means. It "forms" quite a bill we know, to get ice on hot nights. Still we wait for information.

#### New York City.

There will be a deficiency of about forty-six thousand dollars in the school fund this year. The superintendent says that it cannot be avoided except by refusing to pay absentee teachers for the period of their absence, whether caused by sickness or any other unavoidable circumstance, or by making a general reduction of one and a half per cent. from the salaries of all teachers.

It is to be hoped that the board of education will find other means of adjusting expenses, for it certainly is, at best, a very poor policy to deprive sick teachers of their pay and to cut down the salaries of the not too liberally paid teachers.

A reunion of the Associate Alumnæ of the normal college will be held Saturday, May 20, at 2 P.M. From one to two o'clock the art exhibit will be open. All graduates of the institution who have studied art have been invited to send specimens of their work to the Alumnæ library, before May 18.

The Conference of Educational Workers, meets Saturday, May 27, 2 o'clock P. M., at Columbia college. The subjects of the papers and discussions are:

Drawing.—How to train pupils to see what lines to make when drawing from objects. How to teach them to make designs; sketches of the forms and pictures of the imagination.—Paper, with illustrations, by W. Bertha Hintz, of the New York Normal art school.

Number.—The principles underlying, and the steps leading to, a clear understanding of the four fundamental rules of arithmetic; paper by Edward D. Farrell, asst. supt. schools, New York.

# Correspondence.

### Advantages of Country Schools.

Advantages of Country Schools.

The ungraded country school is the best practice-school for a young teacher; nor should its educational advantages for pupils be underrated. In the long race for wealth, position, and honor, the country boy often reaches the coveted prize much in advance of those in the city grades whose walks are paths of ease and comfort. Perhaps the chief reason is that the country boy combines physical training with mental work. During a part of the year he works on the farm and acquires muscular strength and habits of industry. In the autumn he goes back to school with a keen relish for study and an established habit of application. Hard work on the home farm, shoveling, ploughing, planting, hoeing corn, mowing, pitching, cutting bushes, laying stone wall, digging potatoes, chopping wood, etc., has made school life seem a play spell to many a boy, and has laid the foundation of habits that have led to success in mental work. Daniel Webster, the "Great Expounder," was successively a farmer's boy, a teacher, and college a student; Grant was a farmer and teamster; "Old Put," who "dared to lead where any dared to follow," was a farmer in Salem, Massachusetts, and Brooklyn, Connecticut; Lincoin, the "Second Washington," was a farm hand; Jay Gould, like Washington was a farm boy and land surveyor; Henry Clay, "the silvertongued orator," was a farm boy and in surveyor; Henry Clay, "the silvertongued orator," was a farm boy and in surveyor; Henry Clay, "the silvertongued orator, was a farm boy and in the mill boy of the Slashes"; Gen. B. F. Butler, of Massachusetts, was a chore boy on a farm; and Dwight L. Moody was a farm hand. Remember Cincinnatus at the plough. Less than two days of hard work at ditching in his father's meadow in Quincy, Massachusetts, made John Adams willing to return to school and become a good Latin scholar. While studying law he was a successful teacher in Worcester.

Teachers of both day and evening schools tell us that the evening school boy from the mill or shop has a stea

of society, it has its bright side in the opportunity afforded for the study of nature and her works. There ingenuity and tact, originality and skill, are most needed in endeavors to develop intellectual capabilities and mental power.

Will you please explain what different colored flags signify ? Also explain the lowering of the flag, etc. A.

1. To "strike the flag" is to lower the national colors in token of submission.

2. Flags are used as the symbol of rank and command, the officers using them being called flag officers. Such flags are square, to distinguish them from other banners.

3. A "flag of truce" is a white flag displayed to an enemy to indicate a desire for a parley or consultation.

4. The white flag is the sign of peace. After a battle, parties from both sides often go out to the field to rescue the wounded or burry the dead, under the protection of a white flag.

5. The red flag is a sign of defiance, and is often used by revolutionists. In our service it is a mark of danger, and shows a

vessel to be receiving or discharging her powder.

6. The black flag is the sign of piracy.

7. The yellow flag shows a vessel to be at quarantine, or is the sign of contagious disease.

 A flag at half-mast means mourning. Fishing and other vessels return with a flag at half-mast to announce the loss or death of some of the men.

 Dipping the flag is lowering it slightly and then hoisting it again, to salute a vessel or fort.
 If the president of the United States goes affoat, the American flag is carried in the bows of his barge or hoisted at the main of the vessel on board of which he is.

Please mention where music for the following songs can be obtained.
"The Village Churchyard," "Bessie, the Drunkard's Child," "Rosie Lee, the Prarie Flower," "Fair Charlotte," "The Prisoners Hope," "Nellie Gray," "The Ship that Never Returned."

H. L. F.

Oliver Ditson, music publisher, New York city, could probably furnish the music.

Supt. Greenwood has indeed discovered a new genus of teachers. He classes them as "regressives," "standstills," and "progressives." Who are the "standstills"? We here think that a teacher will move forward or backward.

A. A. M.

Who is chief justice of the U. S.? Hon, Melville W. Fuller.

SUBSCRIBER.

Could you give me any information on the subject of long division or could you recommend any book that would be of benefit in teaching the subject? I have to deal especially with first lessons in "Long Division."

We print an article on the subject this week.

"I'm hungry all the time," is a common expression with those who take Hood's Sarsaparilla.

The North Wellington Teachers' Association (Ontario) holds its annual meeting this week, Thursday and Friday. The subjects chosen for discussion, are:

The School of the Future.—S. B. Westervelt. Leaders of Discussion: Messrs. Dale, Wiseman, and Jarrett.—The Philosophy of History and How to Teach it?—Flora McGill. Leaders of Discussion: Messrs. Forsyth, Harper, and Miss Thomson.—Limit of Work in Geography for II. Class, and how to Present it.—Ada Lowes. Leaders of Discussion: Misses McKee, Cobean, and Robinson.—How to Teach all the Subjects Prescribed for Rural Schools in the given time?—T. H. Johnston. Leaders of Discussion: Messrs. Perry, Later, and Walker.—How to Teach Drawing to a Third Class.—Robt. Douglas. Leaders of Discussion: Misses McGill, Craigmill, and Cushnie.—Five-Minute Talks on School Discipline.—Wm. Higgs, Peter McArthur, Mary Duncan, Annie Black, and Etta M. Jolley.—How to Make the School-Room Attractive.—Jas. A. Duff. Leaders of Discussion: Messrs. Dorrance, Gordon, and Gray.

The Pennsylvania and Maryland Teachers' Associations will have no meetings in 1893, on account of the Columbian exposi-

#### Summer Schools.

Cook Co. (Ill.) Summer Normal School, Englewood, Ill. July 10, 28, Col. Francis W. Parker, principal. Martha's Vineyard Summer Institute, July 10, W. A. Mowry, president,

Summer Course in Languages. (Berlitz Schools of Languages. Auditorium, Chicago, Ill.) Asbury Park, N. J.

Cornell University Summer School, Ithaca, N. Y., July 6, Aug. 16. The Registrar, Cornell University, Ithaca, N. Y.

Summer Session of the Neff College of Oratory, Atlantic City, N. J., June 26, July 21. Silas S. Neff, president, 1414 Arch street, Philadelphia,

Chautauqua Assembly, College of Liberal Arts and other Schools, Chautauqua, N. Y. W. A. Duncan, secretary, Syracuse, N. Y. Summer School, Elocution-Delsarte, July 5. Address H. M. Soper, 26 Van Buren street, Chicago, Ills.

Summer School, Greer Normal College, Hooperton, Ills., June 13. William H. Monroe, president. The Sauveur College of Languages, Rockford College, Rockford, Ills., aly 3. Address Dr. L. Sauveur, 6 Copley street, Roxbury, (Boston),

The National Summer School at Chicago, Englewood, Ills. Address Chas. F. King, manager, Boston Highlands, Mass.

Summer School for Teachers at Sherburne, N. Y., July 19. Address W. S. Knowlson, Sherburne, N. Y.

Midsummer School at Whitney's Point, N. Y., July 24, Aug. 11. H. T. Morrow, manager, Binghamton, N. Y.

Summer Session of six weeks of the National School of Elocution and Oratory, at Grimsby Park, Ont., Can., July 3, Aug. 12. Geo. B. Hynson, principal, 1020 Arch street, Philadelphia, Pa. Vanderbit University Summer School for Higher Physical Culture, Nashville, Tenn., June 16, Aug. 16.

The State University of Iowa Summer School, Iowa City, June 19, four weeks. Charles A. Schaeffer, president.

Callanan Summer School of Methods Des Moines, Iowa. C. W. Martindale, president, Des Moines, Iowa.

### Meetings of Educational Associations.

MAY 18-19.—North Wellington Teachers' Association, Ontario. At Daytom. Pres., R S. Swan, Teviotdale; Sec, D. C. Dorrance, Harriston; Treas., John Gray, Clifford. Director, Mr. Houston.

JUNE 2-July 3.—The S. E. A of North Carolina, meets at Moorehead city. Pres. J. J. Blair, Winston; Sec. E. G. Harrell, Raleigh.

JUNE 22-24.—The State Educational Association of Louisiana will hold its tenth annual session in the Chautauqua Auditorium, Griffith Springs, near Ruston. Pres., Col. J. W. Nicholson, Baton Rouge, La.; Sec's., D. M. Scholars, Monroe, La., and R. L. Himes, Natchitoches, La.

JUNE 27-30.—Arkansas State Teachers' Association will be held at Morrilon. Pres. A. E. Lee, Russellville, Ark.; Sec. H. A. Nickell, Ozark, Ark.

JUNE 28-30.—Brunswick Provincial Teachers' Institute will be held at Fredericton, N. B. Pres. Dr. J. R. Tuch, Fredericton, N. B.; Sec. Jas. M. Palmer, Fredericton, N. B., Can. JUNE 30.—Georgia State Teachers' Association will be held at Gainsville. res. E. B. Smith, Le Grange, Ga.; Sec. J. W. Frederick, Marshallville,

JULY 10.—Kentucky State Teachers' Association, convenes at Louisville.

JULY 11-12-13.—Southern Educational Association. Louisville, Ky. JULY 25-26-27.—South Carolina State Teachers' Association, will meet at Spartansburg. Pres., Dr. S. Lander, Williamston; Sec., Prof. Dick, Union.

JULY 25-28.—Educational Congress at the World's Fair.

DECEMBER.—The Oregon State Teachers' Association will convene at Portland. Pres., E. B. McElroy, Salem, Oregon.

DEC. 27.—The South Dakota State Teachers' Association will convene at Parker, S. D. Pres., C. M. Young, Vermillion, S. D.; Sec., Edwin Dukes, Parker, S. D.

DEC.—The Wyoming State Teachers' Association will convene at Rawlins, S. D. Pres., A. A. Johnson, Laramie, Wyo.; Sec., J. O. Churchin, Cheyenne, Wyo.

#### Science and Industry.

The Diamond will Burn.—According to Henri Moissan, who has succeeded in making diamonds artificially, diamonds will burn at a temperature of from 700° to 875° C. The harder the

burn at a temperature of from 700° to 875° C. The narror the stone the higher the burning point.

Lockjaw Can be Cured.—Until last year the terrible disease of lockjaw, or tetanus, was fatal in nine cases out of ten. Seven years ago a young German student found all the symptoms of lockjaw in mice under whose skin he had placed small portions of dirt from streets or open fields. The pus from the wounds gave tetanus to other rabbits inoculated with it; this pus was found to contain a healths shared like a drumstick, the cause of the dispersions of the street contain a bacillus shaped like a drumstick, the cause of the discontain a bacinus snaped like a drumstick, the cause of the disease. Next it was shown that the tetanus was always due to the same bacillus, and that this is found everywhere in the surface soil of streets or fields. In 1890 it was discovered that rabbits treated with tri-chloride of iodine did not take the disease, and that their blood injected into a healthy rabbit protected it from the malady. The blood of the animals treated with tri-chloride of iodine was found to gue for advanced access (lack) in particular. of iodine was found to cure far advanced cases of lockjaw in white mice. Dogs were next made proof against lockjaw by inoculating them gradually with violent tetanus "cultures." An albuminous substance was taken from their blood and made into a powder that would kill the drumstick-shaped bacillus wherever This was tried on several human beings having lockjaw,

The Pine Beetle's Enemy.—An enemy has been found for the destructive pine beetle existing in West Virginia and other states further south. It has been introduced from Europe, and has already saved many acres of pine timber. The foreign beetle distroys the pine beetle, attacking the larvæ in the bark and also

distroys the parent beetle, statement will be stated and statement better.

Bridging the Straits of Dover.—An English company has asked permission of parliament to bridge the straits of Dover. The design provides for a cantilever bridge of 73 spans, alternative control of the supported on 73 pairs carrying a ately of 1,630 and 1,310 feet, supported on 72 piers, carrying a double line of rails, with a clear headway underneath of 200 feet, all to be erected at the great cost of \$163,750,000. The company agrees to complete this bridge, the greatest ever built, within a period of seven years.



#### Geographical Notes.

Are Ther e Live Mastodons ?- It would seem so if the stories of the Stickeen Indians of Alaska are to be believed. Last spring, while out hunting, one of these Indians came across a series of large tracks, each the size of the bottom of a salt barrel, sunk deep in the moss. He followed the trail for some miles, finally coming out in full view of his game. As a class these Indians are the bravest of hunters, but the size of this new animal filled the hunter with terror, and he took to swift and immediate flight. He says the creature was as large as a post trader's store, with He says the creature was as large as a post trader's store, with great, shining, yellowish white tusks and a mouth large enough to swallow a man at a single gulp. He claims that the animal was of the same species as those whose bones and tusks lie all over that section of the country. The fact that other hunters have told of seeing these monsters browsing on the herbs up along the river gives a certain probability to the story. On Forty-mile creek bones of mastodons are quite plentiful. Scientists have held, up to the present, that the mastodon has been extinct for thousands of years.

thousands of years.

Usefulness of the Camel.—In the mining regions of Nevada and Arizona, the camel as a beast of burden was not a success. and Arizona, the camel as a beast of burden was not a success. In South Africa, however, they are destined to supplant the horse in mining regions. They are found to be very useful in making long journeys in the arid interior regions of southwest Africa, as they are able to travel a whole week without water or food. In Australia the camel is fast taking the place of bullocks for use in the barren interior regions. It is stated that there are already opened up and in regular work in Australia five lines of camel traffic, and that on these lines over 2,000 camels are in daily use. Bullock teams will make only about 10 miles a day; the camel will travel 84 miles in 18 hours and carry a load of 300 nounds. will travel 84 miles in 18 hours and carry a load of 300 pounds. In the interior of Australia are 1,000,000 square miles of almost unknown desert, and it is on the great inland plains that it is insettlements may be more directly connected than by the old bul-lock routes. On the arid plains and among the mud flats and brackish lakes the camel finds plenty of coarse grass and thorny shrubs on which to live. It is claimed that work can be found in Australia for 1,000,000 camels.

The Old and the New in Mexico.—A recent traveler says that in Mexico the women grind corn and the men carry water, as they did in the days of Abraham, and yet there are electric wires overhead, electric lights, and telephones. It is said there are 6,000,000 Indians in Mexico seeking only satisfaction of mere animal wants, and they constitute more than one-half the population. In the buildings there is a quaint blending of Moorish

and Gothic architecture.

# New Books.

Although the namesake of York, England, in the New World has far outgrown that historic town, yet in some respects the old town has not lost its importance. Old York, which was once virtually the capital of England, has yielded commercially to many much younger towns, but has maintained its place as a center of religious influence. The stately minster remains as beautiful as ever, and still attracts the admiration and affection of the whole of the north of England. This city forms the subject of a volume by Rev. William Hunt, M. A., in the series on Historic Towns. The historical portion of the narrative is very interesting because this city has been the scene of many great events, while the descriptions of ancient buildings and of social and political institutions will be eagerly read not only by the patriotic Englishman, but by the heir to Britain's glory, the American. (Longmans, Green & Co., New York.)

Dr. Emmet Densmore, known in England as the founder of the Natural Food Society and the editor of the magazine Natural Food, has written a book entitled How Nature Cures. It gives a system of hygiene, and also the principal arguments against the use of bread, cereals, pulses, potatoes, and all other starch foods. The author is opposed to drugs and all drastic medicines and in favor of overcoming disease by diet and obedience to hygienic laws. Though many will take issue with him on the diet question, the book has much that will meet the approval of all schools of medicine. For nurses it will prove of value, as it aims to give them directions for the speedy cure of illness. In the way of hygiene there are many useful directions in regard to breathing, bathing, exercise, etc. The author's efforts to disseminate information on these important topics merit approval and encouragement. (Stillman & Co., 1398 Broadway, New York. \$2.00.) Dr. Emmet Densmore, known in England as the founder of the

It has been found by practice that the most effectual way to teach children the geometrical figures and other forms that are the basis of art is by means of paper-folding. Katherine M. Ball, a teacher of much experience, has prepared a little book on this subject giving directions by which the teacher can lead the pupils, step by step, from simple to complex forms. The teacher who takes up this work will be amply rewarded by the delight the children will experience and the progress they will make. The illustrations show the evolutions of designs from simple figures, especially the square and circle. (The Prang Educational Co., Boston.)

The name of Concord has a peculiar significance for an American, and especially for a New Englander. In her Old Concord: Her Highways and Byways Margaret Sidney has described the noted spots and the people of this historic town reverently, as one should, with delicate touches to lighten up the picture. The illustrations by Miss Mary Wheeler, A. W. Hosmer, L. J. Bridgemen. and H. P. Barnes show the points of historic interest as they were during the Revolution and as they are now; also the haunts of Thoreau, Hawthorne, and Emerson. The book is printed on a fine quality of paper, with large fine type, and has wide margins. fine quality of paper, with large fine type, and has wide margins and gilt edges. The binding is green cloth with an elaborate front cover design in black and gilt in which the Minute man is a prominent figure. (D. Lothrop Co., Boston. \$2.00.)

Dr. Edward H. Magill is doing a great service to English-speaking persons who wish to learn French, and also to French by presenting in a series representative works of the best French writers, in their own language, to be used as reading books by students. These volumes are intended especially for books by students. These volumes are intended especially for practice in rapid reading, in translation first, and in the later stages of the course, in the original, without either oral or mental translation so far as possible. The first volume is devoted to a presentation of productions of Francisque Sarcey, a distinguished critic and romancer. His writings are noted for their delicacy and purity, some being interesting psychological studies. Among this class are Le Piano de Jeanne and Qui Perd Gagne. Dr. Magill has supplied a biographical notice of the author and numerous notes concerning the peculiar and expressive idioms with which French literature abounds. (Christopher Sower Co. which French literature abounds. (Christopher Sower Co., 60 cents.) Philadelphia.

The study of English classics in their entirety is a great im-The study of English classics in their entirety is a great improvement on giving a scrap of a masterpiece here and a scrap there. By this plan the pupil is enabled to judge of them as works of art. But it is well not to detach them entirely from their historical moorings. It has been the purpose of Henry S. Pancoast in Representative English Literature, from Chaucer to Tennyson, to give an idea of the history of English literature, including the outside influences that have helped to shape it, together with selections (complete works) illustrati...g the author's style. It therefore occupies an entirely different place from the ordinary text-book, which too often attempts to be encyclopedic. The author divides English literature into the period of preparation, of Italian influence, and of French influence, and the modern tion, of Italian influence, and of French influence, and the modern English period. In each of these he gives enough to arouse in the pupil a desire to know more about the main writers and their works. There is a map giving literary landmarks in England; also a few necessary notes at the bottom of the pages. (Henry Held & Co. New York) Holt & Co., New York.)

The student interested in the history and development of the English language will find great help in the book recently published, entitled *History of English*, by A. C. Champneys, M. A. assistant master at Marlborough college. He has endeavored as far as possible to keep clear of technical terms and has excluded far as possible to keep clear of technical terms and has excluded abbreviations from the text. The grounds on which certain conclusions have been arrived at have been given, and everything has been done to make easy reading of a difficult subject. Two courses from which to choose lay open before the author—to discuss at one time the progress of the English language as a whole during a certain period, or to take one subject, as the verb, throughout the history of the language. He chose a compromise between the two. The chapter on sounds, with which the subject would naturally be introduced, was omitted partly because of the extreme difficulty of making it at once scientifically adequate and interesting to the ordinary reader. The book shows deep study and thought and thorough investigation of the best authorities, and will be welcomed by those who wish to make a study of English and yet do not care to take up the more exhaustive works. (Macmillan & Co., New York, \$1.25.) works. (Macmillan & Co., New York, \$1.25.)

It is fortunate that attention has been called to the destruction of the forests in this country before they have entirely disappeared. The reckless and unscientific way in which large areas have been denuded has done an incalculable amount of injury which can only be repaired by a long period of judicious forest culture. The

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introduction of Arbor day has done much to direct attention to this important subject. The spread of correct ideas on the subjuct has been due to the labors of enthusiastic, and we may say patriotic, men like Edwin J. Houston, A. M., who has just published a book on Outlines of Forestry; or, The Elementary Principles Underlying the Science of Forestry, being a series of primers of forestry. In this are considered the conditions necessary for the growth of plants, distribution of plant germs, conditions necessary for the growth of trees, soil, enemies of the forest, rain, drainage, climate, tree-planting, and other topics. In the appendix are lists of trees suitable for planting in different parts of the United States. In school the book may very appropriately be read and consulted in connection with the study of botany and geography. Outside the school it will greatly aid in the care and geography. Outside the school it will greatly aid in the care and propagation of forest life, as the principles of forestry are set forth briefly and clearly, and at the same time scientifically. (J. B. Lippincott, Philadelphia, \$1.00.)

Lost in a Great City, by Amanda M. Douglas, is a story nar-nating a wait's experience in New York. It gives truthful repre-sentations of phases of New York life and presents a number of well delienated characters. The plot is interesting and worked out with much skill. The book is No. 26 of the Good Company series. (Les & Shared Bessel) series. (Lee & Shepard, Boston, 50 cents,)

La Mare au Diable, which is considered the most perfect specimen of George Sand's powers as a writer, is published in Heath's Modern Language series, being edited and annotated by Prof. F. C. de Sumichrast, of Harvard. It is a simple love story not of the analytical kind, but the characters reveal themselves gradually through word and action. The student of the French language will find the translation of this story a delightful occupation. (D. C. Heath & Co., Boston, 20 cents.) pation. (D. C. Heath & Co., Boston. 30 cents.)

It is hard, even for one employed in the midst of the whirl and bustle of New York, to appreciate the many-sidedness of its life and activity. One is, however, very forcibly impressed with the and activity. One is, however, very forcibly impressed with the greatness of the metropolis on examining a good hand-book, especially that just published—King's Handbook of New York City No labor or expense has been spared to make this the most elaborate and accurate ever published in a single volume. The book contains 928 pages, more than 850 illustrations, 30 chapters, and

an index of 20 pages with 60 columns, containing over 4,600 items and about 20,000 references. Every illustration has been made expressly for this book, as were nearly all the original photographs. They have been carefully printed on fine paper. The text is the result of the painstaking care of many individuals, and the manuscript underwent a thorough revision at the hands of several thousand people such of whom is an authority on the portion. thousand people, each of whom is an authority on the portion submitted to him. The text has been amplified, rectified, and submitted to him. The text has been amplified, rectified, and verified by Mr. Sweetser, the foremost American in this special field. The result is a work that is not a mere compilation of facts, but one that is attractive and readable. Of particular interest is the historical part in which old New York is vividly described by means of words and illustrations. All who wish to know the past of the great city, and the present with its diversified interests—social, religious, charitable, political, manufacturing, financial, commercial, etc.—should read this book. (Planned, edited, and published by Moses King, Boston, Mass.)

A new Reading-Circle edition of S. S. Laurie's well known life of John Amos Comenius has been issued. It differs from those previously published mainly (1) in being indexed by head-lines, (2) in the insertion of five portraits, and (3) in the addition of a bibliography of some length, with photographic reproductions of pages from early editions of the works of Comenius. The book was written entirely from original sources, the writer having examined the four volumes in Latin of Comenius' didactic writings. Although the space was limited the author endeavored writings. Although the space was limited the author endeavored to leave out nothing essential. The book will be in great demand among students of the life and work of this great educator. (C. W. Bardeen, Syracuse, N. Y. \$1.00.)

THE SCHOOL FOURNAL is published weekly at \$2.50 a year. To meet the wishes of a large majority of its subscribers it is sent regularly until definitely ordered to be discontinued, and all arrears are paid in full, but is always discontinued on expiration if desired. A monthly edition, THE PRIMARY SCHOOL JOURNAL for Primary Teachers is \$1.00 a year. THE TEACHERS' INSTITUTE is published monthly, for those who do not care for a weekly, at \$1.25 a year. EDUCATIONAL FOUNDATIONS is a monthly series of books on the Science and Art of Teaching, for those who are studying to be professional teachers, at \$1.00 a year. Our Times is a carefully edited paper of Current Events, at 30 cents a year. Attractive club rates on application. Please send remittances by draft on. N. Y., Postal or Express order, or registered letter to the publishers, E. L. Kellogg & Co., Fducational Building, 61 East 9th St.; New York.

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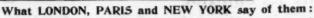
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#### Magazines.

—A Conan Doyle's new novel, "The Refugees," now running in Harper's Magazine, is attracting much attention on both sides of the Atlantic. The Publishers' Circular, London, says, "It is one of the few really successful tales that have appeared since the days of Soott"

since the days of Scott "
—The Review of Reviews for May strikes out into a fresh field with Mr. Stead's character sketch of Frederick Selous, the great African traveler and hunter—the greatest Nimrod, in fact, that this world has ever produced. Mr. Stead makes a marvelously interesting chapter of exploits with lions, elephants, and other large game in the heart of Africa. The "Progress of the World" department is rendered considerably longer than usual by reason of the great burden of topics which the month of April has produced with its American and European weekly activities,—the completion of the World's fair, the great naval review and pageant at New York, the labor struggles at home and abroad, etc.
—The series of articles on foreign nations at the World's fair is continued in the May number of the North American Review by an article by Mr. Clareace Andrews, on the Persian exhibit, and one by Mr. George Stewart, on the Canadian exhibit.

### Literary Notes..

—A novel by John Kendrick Bangs, called Top-pleton's Client will be published by Charles L. Webster & Co.

—Macmillan & Co, have begun the publication of Book Reviews, a monthly journal devoted to new and current publications. It is well conducted and will be found useful by all book buyers.

—The second volume of Green's Short History of the English People, in the splendidly-illustrated edition, will be ready at the Harper's about the middle of this month.

— The Scribners intend to bring out six illustrated volumes containing short stories that have appeared in their magazine. Each volume will have a separate title. The first will be called Stories of New York, and the next Stories of the Railway. The others will be Stories of the South, Stories of the Sea, Stories of Italy, and Stories of the Army.

—It is intended that the Prang Art Educational Papers shall place the best thought of the day, on art education, in such form as to be accessible to teachers, students, and the general public. Successive numbers will be announced from time to time, as issued.

time, as issued.

—Certainly every teacher who goes to the fair will not lose this grand opportunity to study every production of merit in the arts and sciences. While they are there they should not overlook the exhibit of Queen & Co., Philadelphia. With a desire to show the possibilities of American instrument making they have arranged for elaborate and representative displays of the high grade apparatus manufactured in their various departments. These exhibits will be in charge of Mr. C. W. Pike, S. B., assisted by a corps of competent experts, Queen & Co. have issued a handsome pamphlet, Some Features of the World's Columbian Exposition, in which their plans are described. Those who intend to visit the fair can receive a copy on application. application.

application.

—The catalogue of Milton Bradley Co., of Home Amusements, 1893'94, will be admired for its good taste and artistic excellence. The background of the cover is a delicate green tint with winter and spring scenes, and springs of delicate tinted apple blossoms, suggestive of balmy, scented breezes. There is a wonderful variety of articles catalogued including toys and sectional pictures, games, and puzzles, educational devices, etc. Each of the articles is fully described; most of the descriptions are accompanied by illustrations. One wonders how the firm could get together so many pretty things until informed that they have their own corps of artists constantly employed in making original designs. In the catalogue are directions how to send for the articles, etc.

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Now to send for the articles, etc.

—Roberts Brothers announce the following publications: A Grbat Man of the Provinces in Paris, by Honore de Balzac, being the second part of "Lost Illusions," translated by Katharine Prescott Wormeley; Destiny, by Susan Edmonstone Ferrier, with photogravure frontispiece designs by Frank T. Merrill, uniform with this edition of Jane Austen's novels; Completion of Pierce's Life of Charles Sumner, by Edward L. Pierce; Patriotism and Science, Some Studies in Historic Psychology, by William Morton Fullerton.

Harper's Weekly for May 10 is in large measure, filled with matter pertaining to the World's

To Cassell's "Unknown" library has just been added Squire Hellman and other Stories by Juhani Aho. Scandinavian literature is, however,

getting more and more popular with us, and this collection of stories is among the best yet made.

—Ginn & Co. have just issued A Reader in Bolany: Part II.—Flower and Fruit, compiled by Jane H. Newell. This volume follows the first part in supplying a course of reading in botany for pupils of the higher grades. It deals with the life-habits of plants, especially as relating to the flower and fruit.

The Philadelphia Ledger says that the teak, which has passed into proverb as the best material for shipbuilding, is superior to all other woods from the fact that it contains an essential oil which prevents spikes and nails driven into it from rusting. This prop-erty is not possessed by any other wood in the world, and furnishes an explanation of the fact that ships built of teak are practically indestructible. Some have been known to last 150 years, and when broken up, their beams were as sound as when first put together.

A gentleman of Oakland, Cal., thinks he has solved the problem of Arctic travels by means of a device which puts a petroleum engine on a sled and makes the engine drive a series of spurs which take hold of the ice and force the sled forward.

VELOCITY OF METEORS.—It has been demonstrated that, while the greatest velo-city imparted to a cannon ball scarcely exceeds 690 meters a second—about 1,500 miles an hour-meteors from space pene-trate the air with a velocity, it is claimed, of 40,000, sometimes 60,000, meters per second. This tremendous speed raises the temperature of the air at once to 4,000° or 6,000° centrigrade, causing in many cases the complete destruction of the meteorite by combustion.

SUPPLY OF TIMBER .- Fortunately, the supply of coal in the earth is so great that the possibility of its exhaustion need not greatly disturb us. It is very different, however, with another, and scarcely less important gift of nature. The supply of wood and timber is constantly diminishing, and at the present increasing rate of con-sumption it cannot be long before all avail-able sources of supply will be exhausted. More timber is annually destroyed by fire and waste than is used in the arts, and it is a matter of the highest importance that the greatest possible care should be taken of our forests, and that the present supply of timber should be utilized with a care and economy commensurate with its real value.

—Popular Science News,

CHANGES IN LEVEL OF THE ATLANTIC COAST.—The fluctuations in height of the Atlantic lowland coast lands of the United States were described by Prof. W. J. Mc-Gee in a paper read before the American Association. In the pleistocene period the land stood between three hundred and eight hundred feet below its present level. Immediately afterward the land rose to from three hundred to six hundred feet above its present height, and the shore of the Atlantic and the Gulf retreated to from one hundred to five hundred miles beyond their present position. Afterward the land gradually sank, and the waters re-ad-vanced until the geography was much the same as to-day. Then came another incursion of the ocean and gulf, bringing seawaters over nearly the area upon which Washington is built, and over considerable portions of the North and the South. During this period there was deposited a series of loams and brick clay and boulder beds, which Washington is located, and which has been named, from the District, the Columbia formation. At the close of the Columbia period the land again rose one hundred or two hundred feet higher than at present, and river channels were cut from fifty to seventy-five miles beyond the present coast line. It then began to sink, and this movement is yet in progress. -Popular Science Monthly.



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Germany has a new field gun, an enlarged rifle, whose ball carries at once shell, shrapnel, and grape. It is by far the most destructive weapon ever used in war-

The organization known as Sons of Veterans was organized in 1881. The order comprises lineal descendants, over 18 years of age, of honorably discharged soldiers, sailors, or mariners who served in the Civil There are thirty-two organized divisions in forty-four states and territories and in Canada, 2,500 camps, and about 100,000 members. Each division has its own corps of officers, chief of which is the division commander.

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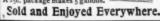
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"Hampton," "Norfolk," "Portsmouth,"
"Berkley," and other points of national and local interest. It also shows the great battle between the *Monitor* and the *Merrimac*, which took place in these waters in the year 1862. For copy of this map address A. Jeffers, Norfolk, Va.

There will be many an agreeable surprise among teachers at Chicago this summer when they find there the headquarters of publishers who have labored with them to publishers who have labored whit them to make their school-room work a success. Among the most popular publishers may be counted the Milton Bradley Co., Spring-field, Mass., the windows of whose headfield, Mass., the windows of whose head-quarters will this summer receive the cool breezes from Lake Michigan. The location is the Liberal Arts building, southeast corner; in the city their rooms are at Thomas Charles Co.'s office, 211 Wabash avenue. At the fair their attendant will furnish the visitor their Educational Catalogue, or the list of Home Amusements or Our Little Story, which is a brief illustrated history of the concern in its different departments since 1860.

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